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RESEARCHES IN ANATOLIA—VOLUME VII

THE ALISHAR HÜYÜK
SEASONS OF 1930–32

PART I

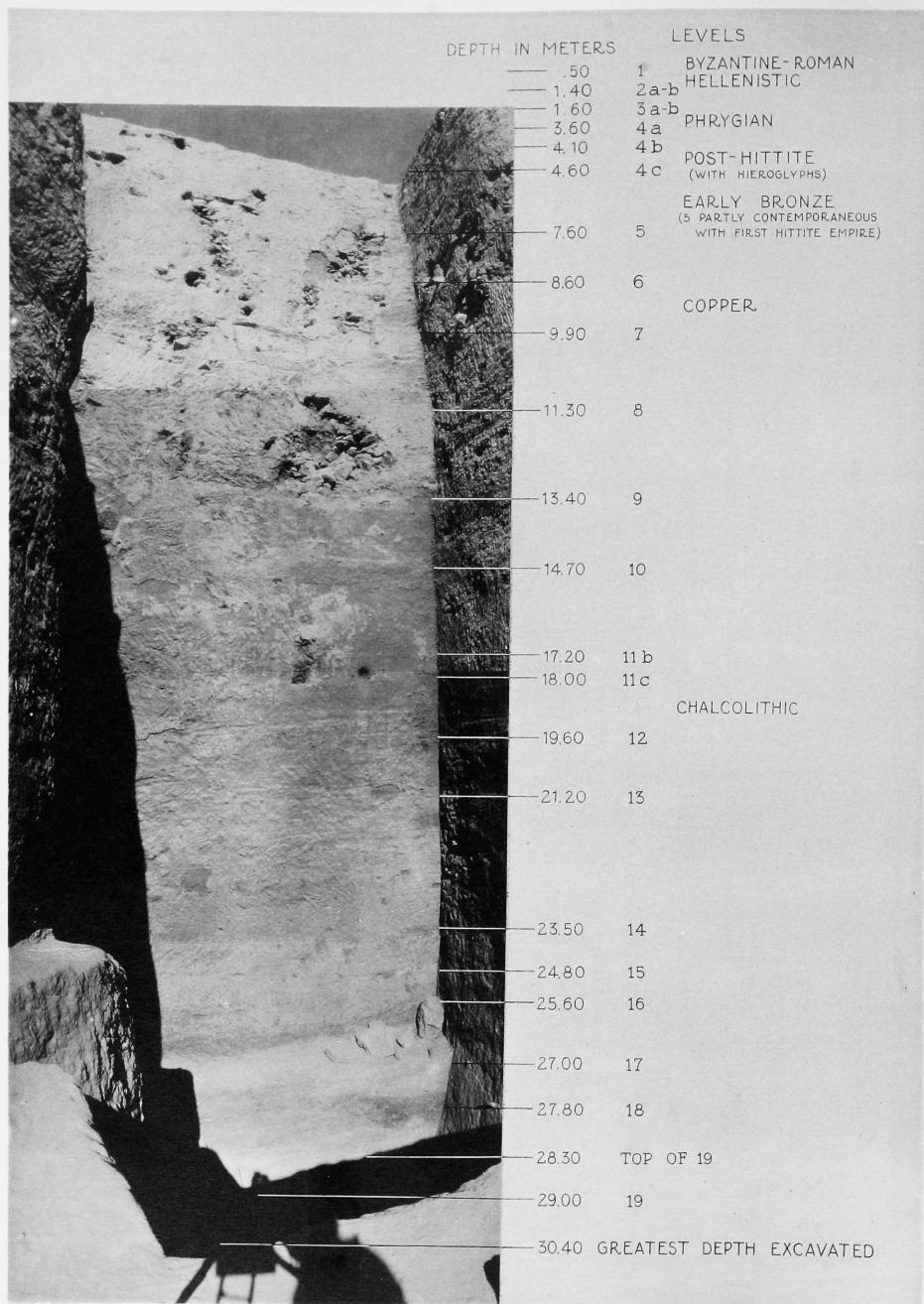
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A STRATIFIED CULTURE SEQUENCE ONE HUNDRED FEET (THIRTY AND A HALF METERS) DEEP,
EXTENDING UPWARD FROM CHALCOLITHIC TO PHRYGIAN REMAINS

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VOLUME XXVIII

RESEARCHES IN ANATOLIA—VOLUME VII

THE ALISHAR HÜYÜK

SEASONS OF 1930-32

PART I

By

HANS HENNING VON DER OSTEN

Field Director of the Anatolian Expedition



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PREFACE

This publication is the first volume of a fully organized and detailed study forming a final report on the excavations conducted by the Oriental Institute of the University of Chicago at the Alişar mound in central Asia Minor from 1927 to 1932. The Alişar mound is situated in a flat valley of a small tributary of the Kanak Su, the largest tributary of the Kızıl Irmak, in the *kaza* of Sorgun (also called Köhne or Yeşil Ova) in the vilayet of Yozgat (formerly Bozuk). The site consists of a nearly oval terrace about 520×350 meters, from which the citadel mound with its three western spurs rises about 38 meters above the valley level. A detailed description of the site and its surroundings may be found in *OIP* VI 44–51.

The results of the seasons of 1927–29 have been presented previously.¹ The only material included here from those first three years is that which is considered essential for interpreting the later material or which requires new interpretation in the light of the later excavations.

The earlier terminology for the various levels has not been retained, because a distinct and important culture before the period called "Alişar I" has been discovered, and the "Alişar III" culture proves to be earlier than "Alişar II," even though partly contemporaneous with it.² Remains of the various cultural periods, identified primarily by means of their pottery, have been subdivided into layers corresponding to building levels. These building levels do not now follow the 1929 classification in all cases, but are numbered in only two sequences. Since the cultural sequence on the citadel mound and its western spurs differs from that on the city terrace, the building levels on the citadel mound are distinguished where necessary by the addition of an "M" and those on the terrace by addition of "T." Levels probably contemporaneous may be recognized in the comparative table (Fig. 281). Wherever it is possible to ascribe architectural remains of previous seasons to the main building levels as now recognized, these remains are indicated on the maps of levels. A few areas adjoining later excavations have been resurveyed. Architectural remains uncovered during the seasons of 1927–29 and not heretofore published are described according to the field records in the files of the Oriental Institute.³ As complete a list as possible is presented of all the burials unearthed by the expedition, since it seems desirable that this material should be in an easily comparable form.

Objects found as burial gifts may be assigned to definite cultural periods with greater certainty than similar pieces found in the refuse of the building layers, since the possibility of intrusion is almost eliminated. Therefore small objects found as mortuary gifts are illustrated with the burials and described with their respective groups. Vessels from the graves are both described and illustrated with the contemporary pottery, with cross-references to the burials from which they come.

This report is divided into three volumes. Chapter i of the present volume is a short survey of the excavation and registration methods employed. A glossary of technical terms appears on pages xxi f. Chapters ii–iv present the material from the prehistoric periods of Alişar. In these chapters, as in those which deal with the historical periods, only a description of the remains and of the circumstances of their finding is given, without attempts at interpretation. Chapters dealing with the historical periods appear in the second and third volumes (*OIP*

¹ *OIC* Nos. 11 and 14; *OIP* VI–VII and XIX–XX.

² A comparative table (Fig. 281) makes this distinction clearer.

³ Fig. 280 correlates the irregular plots of 1927 with the 10-meter net; this correlation is a revision of *OIP* XIX, Fig. 377.

XXIX-XXX). Mr. Frederick O. Waagé has furnished a discussion of the fine wares of the Hellenistic and Roman-Byzantine periods, and Dr. Rudolf M. Riefstahl has made some remarks on the glazed wares of the Byzantine and Turkish periods. *OIP* Volume XXX includes also reports by specialists on coins, wood, skeletal material, etc.⁴ For such contributions I am indebted to Miss Christine Alexander, Mrs. S. E. Fogelberg, Paul Gries, Arthur I. Kendall, Wilton Marion Krogman, Edward T. Newell, Bryan Patterson, Samuel J. Record, Miss Gisela M. A. Richter, and S. K. Roy. Professor E. A. Speiser was kind enough to arrange to have the pottery analyses made by Smith, Rudy & Co. The metal analyses were made by Dr. C. H. Desch's committee of the British Association for the Advancement of Science and by the Department of Chemistry at the University of Chicago. Samples of grain were examined by the United States Department of Agriculture. Professor Albert Johannsen examined the obsidian. In chapter vii of *OIP* XXX appear typological charts showing (in line drawings) the development of various kinds of small objects. That volume concludes with a survey of the historical background and an attempt to correlate the archeological material of Alişar with that of Asia Minor as a whole.

The pottery charts offer drawings of every type of vessel recovered during the six years of excavation. Because of the importance of the Chalcolithic deposit, uncovered in 1930 and 1932, all the individually catalogued objects found in it are enumerated, whereas only types and principal variants from the other periods are presented.

A few of the objects from the excavation are in the Oriental Institute Museum in Chicago, but most of them are in the Ethnographical Museum at Ankara. All the cuneiform tablets were returned to Ankara after study in Chicago.

It is impossible to enumerate all who during the course of the years have given of their time and help. I gratefully remember Mrs. Murray Crane, Mrs. Parker Lane, and the late Mr. Edward Robinson, through whose interest the first expedition, in 1926, took place. I wish to express my sincerest gratitude and appreciation to Professor James Henry Breasted, who incorporated the project which I submitted to him into the program of the Oriental Institute. Through his interest and his decisive action this excavation was made possible, and the nine years of my connection with the Oriental Institute will ever remain significant in my life.

During the years of field work the Turkish government assisted the expedition in every possible way. His Excellency the President, Gazi Mustafa Kemal Paşa, took a personal interest in our work and visited our small test excavation at Gâvurkalesi.⁵ The Ministers of Public Instruction, the late Necati Bey (1926-28), Cemal Hüsnü Bey (1929-31), Esat Bey (1932), and the late Dr. Reşit Galip Bey (1932), took a personal interest in our work and granted us every possible assistance. It was with the greatest regret that I learned in February, 1934, of the death of Dr. Reşit Galip Bey. Not only was he a personal friend of the writer, but through his interest in historical problems of his country he had stimulated scientific archeological research in Anatolia. The Ministers of the Interior, Cemil Bey (1926-27) and Şükrü Kaya Bey, also facilitated our excavation and exploration in every way. Nahi Atuf Bey, Mehmet Emin Bey, and Avni Bey, undersecretaries of state of the Ministry of Public Instruction, were ever helpful.

The Directors of Antiquities in successive years, Mübarek Galip Bey, Ahmet Aziz Bey, and Dr. Hâmit Zübeyr Bey, took care of all formal matters and granted us many privileges. It was our good fortune to have Dr. Hâmit Zübeyr Bey visit our work several times, and I am especially indebted to him for invaluable information as to ethnographical matters. Osman Ferit Bey, since 1931 the director of the Ethnographical Museum at Ankara, each year has permitted

⁴ The inscriptions have been published in a separate volume (*OIP* XXVII) by Dr. Ignace J. Gelb.

⁵ *OIC* No. 14, pp. 56-90.

us to exhibit and rearrange our collections in the museum, assisting us as much as possible. Professor Julius von Mészáros, adviser to the Ministry of Public Instruction, most willingly assisted us with his advice and experience. I wish also to acknowledge the helpfulness and consideration of the successive Turkish government commissioners assigned to residence at the Alişar mound: Ali Şerafeddin Bey, Muharrem Bey, Avni Bey, Professor Emin Ali Bey, Ömer Bey, and Dr. Remzi Oğuz Bey.

To the High Commissioner of the United States, Admiral M. L. Bristol, and to the Hon. J. C. Grew and the Hon. C. H. Sherrill, ambassadors of the United States to the Turkish Republic, I wish to express my thanks for their interest. Messrs. Ernest L. Ives, Jefferson Patterson, and G. H. Shaw, successive chargés d'affaires of the American embassy in Ankara, and Mr. Julian Gillespie, commercial attaché, showed their interest and helpfulness on all possible occasions. Dr. Hilmî Malik Bey of the American embassy was not only a true friend but gave valuable assistance on several occasions.

Dr. Martin Schede, the director of the Abteilung İstanbul des Archäologischen Instituts des Deutschen Reiches, visited our dig at Alişar, and we profited much from his experience and advice. We are greatly indebted to him also for the hospitality which he extended to the members of our expedition in İstanbul. Dr. Paul Wittek also visited us and aided us with information on ethnographical and historical questions.

Their Excellencies Tevfik Bey and Hikmet Bey, secretary-generals to the President, and also the members of the Turkish Historical Society manifested their interest. I am indebted to His Excellency Nuri Paşa for information on Islamic pottery, to Regierungsrat Professor Dr. K. O. Müller for information on the agricultural history of this region, to Dr. Gerhart Bartsch for geological information, and to Mr. John Aggiman for his technical advice. Among the many other friends of the expedition, I wish to mention especially Dr. Şevket Aziz, Hasan Fehmi Bey, and Lutfî Tahsin Bey.

The governor-generals of the vilayet of Yozgat, Ali Riza Bey and Bekir Sami Bey, visited the excavation several times a year and were always ready to aid us. The deputy of Yozgat, Avni Bey, always extended to us cordial hospitality and friendship. Fahri Bey, the commander of the gendarmerie, and Fuat Bey, the prosecutor-general of the *kaza* of Sorgun, were most helpful; I gratefully remember the many kindnesses of these gentlemen and their colleagues. Zeki Bey, the station master of Hacışfaath, took excellent care of the complicated transportation required by the expedition during all the years. Several times we had the pleasure of having the Director of Public Instruction and the teachers of Yozgat as guests in our camp. In 1932 members of the Turkish Historical Congress visited Alişar, accompanied by Esat Bey, the Minister of Public Instruction.

These acknowledgments would be most incomplete if they did not give full recognition to the efficient staff of the expedition during the years of excavation. To all these gentlemen I wish to express my sincerest gratitude for their co-operation and unselfish service under extremely difficult working conditions. It was only through their help that the work was carried on successfully; on the accumulated results of their co-operation this report is based.

In 1927 the scientific staff of the expedition consisted of Dr. Erich F. Schmidt, Frank H. Blackburn, and myself. Dr. Schmidt was associate field director during 1928 and 1929. In 1929 he was in sole charge of the excavation at Alişar while I was engaged in exploring south-eastern Asia Minor. From 1927 through 1929 Mr. Blackburn assisted in the archeological survey of the surroundings of the Alişar mound. From 1928 through 1930 Richard A. Martin, attached to the expedition in the capacity of archeologist, was especially in charge of registration, and on his observations part of chapter ii is based. In 1931 and 1932 this work was carried on by Dr. Calvin W. McEwan. In charge of the anthropological registration in 1930 and 1931

PREFACE

was Owen S. J. Albert. From 1930 to 1932 R. Carl Haines was in charge of the architecture; most of the plans and drawings of this final report are his work. The drawings of the pottery found in 1931 are by Mr. Ulrich Roller. Mr. John A. Morrison was attached to the expedition as geographer in 1930 and 1932, to continue the work on the archeological survey started by Mr. Blackburn. From 1929 until 1932 Hermann Schüler was the photographer of the expedition, doing excellent work under great difficulties. Messrs. Karl Eugen von der Osten and Robert D. Morrison were attached to the staff as volunteers, the former in 1930 and 1932 and the latter in 1931. Mehmet Ali Bey of the Galata Serai school joined the expedition in 1930 and 1931 as draftsman. Mr. Martin Filla assisted during part of 1932 with the registration of the finds.

In 1931 Dr. Kurt Bittel, the field director of the German Bogazköy expedition, visited and worked at Alişar for several weeks. In 1932 he joined the expedition and took charge of the excavation of the Post-Hittite fortresses, the lower fortress, and L 14-15. His report, in the translation of which I received assistance from Mr. Norris L. Brookens, is included in chapter ii of *OIP* Volume XXIX. His presence at the excavation and his collaboration were of the greatest value, and I gratefully recall my many discussions with him, pertaining especially to the prehistoric cultures of Asia Minor. He was also kind enough to help me in the preparation of the manuscript of this final report, and chapter ii is based largely on data furnished by him. During 1932 Curt Stein, architect of the Bogazköy expedition, was in charge of the excavation of the Hittite outer defense wall, for which he furnished the plans and reports.

To Mr. Wayne Lloyd Hurst, the financial secretary of the Oriental Institute, I am grateful for advice and suggestions concerning the administration of funds. During the six years of the Alişar campaign Josef Reifenmüller was our camp superintendent, with Johann Scharer as assistant. The sudden death of Mr. Reifenmüller in 1933, shortly before he was to have joined the German excavations at Boğazköy, was an occasion of personal grief to all who had worked with him. Mr. Reifenmüller was at all times a faithful employee and a friend to all of us. During the entire course of the expedition Mehmet Hüseyin was our chauffeur.

In the process of preparing this final report I was again assisted by Dr. T. George Allen, Miss Ruth C. Wilkins, and Miss Ruth L. Schurman of the editorial department, to all of whom I am deeply grateful for their painstaking effort.⁶ I wish also to acknowledge the friendly co-operation of Dr. Watson Boyes, secretary of the Oriental Institute Museum, in granting me every facility of the Institute laboratories. The Oriental Institute librarians, Miss Johanne Vindenäs and her assistants Misses Asgerd V. Skjönsberg, Margaret Boell, and Vivian Totten, were very helpful in supplying me with reference works, which were utilized in especially large numbers in preparing *OIP* Volume XXX. In 1933 Miss Cornelia M. Roberts assisted in the sorting and cleaning of the potsherds. The many plans and drawings which had to be made in Chicago were done by Walter W. Romig. For the greater part the potsherd drawings were made by Robert Rider Tufts, who helped in preparing other material also. Mr. Albert R. Hauser reconstructed and mended the pottery. The difficult filing and secretarial work was accomplished by Mrs. Claude Carlton.

HANS HENNING VON DER OSTEN

CHICAGO
August 25, 1934

⁶ [Since the foregoing Preface was written, Dr. Adolph A. Brux has joined the editorial staff, and it becomes my pleasant duty to thank him also for the careful attention which he has devoted to portions of my third volume.—H. H. v. d. O.]

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LIST OF ABBREVIATIONS

- AAA* Annals of archaeology and anthropology (Liverpool, 1908—).
- MVAG* Vorderasiatisch-aegyptische Gesellschaft, *Berlin*. Mitteilungen (Berlin, 1896–1908; Leipzig, 1909—).
- OIC* Chicago. University. The Oriental Institute. Oriental Institute communications (Chicago, 1922—).
- OIC* No. 11 SCHMIDT, ERICH F. Anatolia through the ages (1931).
- OIC* No. 14 OSTEN, H. H. VON DER. Discoveries in Anatolia, 1930–31 (1932).
- OIP* Chicago. University. The Oriental Institute. Oriental Institute publications (Chicago, 1924—).
- OIP* VI–VII OSTEN, H. H. VON DER, and SCHMIDT, ERICH F. The Alishar Hüyük, season of 1927. Parts I–II (1930–32).
- OIP* XIX–XX SCHMIDT, ERICH F. The Alishar Hüyük, seasons of 1928 and 1929. Parts I–II (1932–33).
- OIP* XXVII GELB, IGNACE J. Inscriptions from Alishar and vicinity (1935).
- OIP* XXIX–XXX OSTEN, H. H. VON DER. The Alishar Hüyük, seasons of 1930–32. Parts II–III (1937).

TERMINOLOGY¹

CHALCOLITHIC = Aeneolithic, Cuprolithic, Mixoneolithic.

Kerpiç (adobe, *pisé*, Arabic *libn*).—Mud tempered with chaff and dried in the sun.

METATE.—The concave lower stone of a hand mill.

PIT DWELLING (*fonds de cabanes, Wohngrube*).

“WHORLS.”—Circular objects perforated in the center. Some of them were probably used as spindle whorls.

For Turkish words and names we endeavor to use the romanized Turkish spelling. The chief differences occur in the cases of *j*, *ch*, *gh* (mute), *zh*, *sh*, and *i* in diphthongs, for which the Turkish uses *c*, *ç*, *g*, *j*, *ş*, and *y* respectively.

Undotted *i* stands for the indefinite vowel.

The word “meter(s)” is to be understood with all measurements.

POTTERY

BURNISHED (*lissé, poliert*).—Rubbed with a pebble or bone to produce a glossy finish. Tool marks are definitely visible.

CORRUGATED (Fig. 67 11).—

DECORATIVE BURNISHING.—A technique in which the strokes of the burnishing tool form a pattern.

FLUTED (Fig. 67 10 and 12).—

FRIT (*fritte, Fritte*).—A siliceous paste incompletely vitrified.

GLAZED (*émaillé, glasiert*).—Covered by a vitrified siliceous paste.

GROOVED (Fig. 67 13).—

MAT PAINT (*peinture mate, Mattmalerei*).—Flat or non-glossy paint. When not otherwise stated, mat paint was used.

POLISHED (*polis, frottiert*).—Rubbed to a gloss in which no tool marks are visible. This term is often used arbitrarily. Undoubtedly most of the pottery, if it shows any polishing, was polished with a hard tool.

PUNCTATED-INCISED (*Furchenstich*).—Decorated with incised line or lines deepened at frequent intervals by pressure on the instrument.

RIPPLED (*gerippt*).—Burnished with parallel strokes.²

SLIP (*engobe, Engobe*).—A paste of fine clay added after the shaping of the vessel.

TEMPERING (*dégraissure, Entfettung*).—Addition of a non-argillaceous material to pure clay to counteract the tendency of the latter to shrink and to serve as a binder.

GRIT-TEMPERING.—Addition of coarse sand or other non-vegetable matter to clay as a temper.

PLANT-TEMPERING.—Addition of vegetable matter to clay as a temper.

WASH (*enduit coloré non argileux, Farb-Überzug*).—A coloring matter with little or no clay, added after the shaping of the vessel.

WET-SMOOTHED³ (*mouillé, geplattei*).—Rubbed with the wet hand to bring the fine clay to the surface of the vessel.

Texture is more or less arbitrarily described as “coarse,” “medium,” or “fine.”

Terms such as “bowl,” “cup,” and “jar” are used somewhat arbitrarily to suggest the type of vessel. Description of details will be clarified by examination of the following examples:

Cup-base (Fig. 84 20-23)

Flaring rim (Fig. 73, e 1709)

Band handle (Fig. 83 11, 14)

Rim rolled inward (Figs. 81 69 and 175 3-9)

Looped handle (Fig. 83 6-8)

Rim rolled outward (Figs. 81 73 and 176 22)

Belled rim (Fig. 70, c 1735 and c 2747)

Simple rim (Fig. 81 1-11)

Carinated rim (Fig. 81 38-61)

Beak-spout (Figs. 241 and 255 3)

Contracted rim (Fig. 248 12)

Handle-spout (Figs. 83 1-2 and 180 7-9)

¹ For assistance in the wording of these explanations I am indebted to Dr. Kurt Bittel and Dr. N. C. Debevoise. Cf. the definitions adopted by a Baghdad conference of archeologists working in Iraq (*Syria* XI [1930] 307-8 and *Archiv für Orientforschung* VII [1931-32] 303-4). Terms not explained here are used according to the definitions given in Webster's *New International Dictionary*.

² Cf. p. 54.

³ Called “wheel-finished” in the Baghdad conference report.

TERMINOLOGY

In the drawings of designs shading represents reddish brown or brownish red (purplish brown in Fig. 236), whereas solid black represents dark brown to black.

Color designations are illustrated by the following examples:⁴

BLACK (Pl. I 6-7)

Brownish black (Pls. V 1-3 and 5 and VI 1 and 3-4)

Grayish black (Pl. I 1)

BROWN (Pls. I 2 and IV 2)

Blackish brown (Pl. VI 2 and 5-6)

Reddish brown (Pls. IV 1, V 4, and VI 1)

Dark brown (Pl. III 4)

Yellowish brown (Pl. III 4)

Purplish brown (Pl. IV 4 and 8)

BUFF (Pls. II 3, III 5, IV 5 and 7, and VI 3-4)

Grayish buff (Pls. I 3 and II 5)

Reddish buff (Pls. IV 8 and V 2)

Pinkish buff (Pls. IV 9 and V 3)

Yellowish buff (Pls. IV 4 and VI 1 and 6)

CREAM-COLORED (Pls. IV 3 and 6, V 4, and VI 2 and 5)

CREAMY WHITE (Pls. II 2 and IV 1)

RED (Pls. V 4-5 and VI 5)

Brick red (Pls. II 1 and IV 2)

Reddish (Pls. V 1 and VI 2 and 5)

Brownish red (Pls. II 2-3, III 5, IV 5 and 7, and VI 3)

Rich red (Pls. III 1-3 and IV 6)

Dark red (Pls. II 4, IV 3 and 9, and VI 4)

⁴ The color plates referred to have all been reproduced directly from and carefully checked with the original objects.

I

OBJECTIVES AND METHODS

OBJECTIVES

When we started excavation in 1927 at the Alişar mound we did not know what we could expect to find. From previous excavations in central Anatolia of such mounds as Orta Hüyük near Dedik by E. Chantre¹ and others near Zerezek and Elbistan by H. Grothe,² we could not draw any conclusions. Early excavations at Kültepe³ near Kayseri were of little value, and the archeological results of Hrozný's 1925 campaign were as yet unavailable; as a matter of fact, with the exception of short preliminary reports⁴ they are still unavailable. That we would find a number of superimposed cultures we were sure, after our investigations in 1926 of many similar mounds within the great bend of the Kızıl Irmak.⁵

Before the start of the excavation in 1927 only Osmanli, Seljuk, Byzantine, Roman, and Hellenistic pottery and small objects could be identified. However, certain red-slipped and painted wares were regarded generally as "Hittite" and a finer painted ware as Phrygian.⁶ We had no idea how many superimposed cultures we might find. Nor did we know what kind of architectural remains to expect, since no traces of buildings showed on the surface of the mound except shallow depressions and low elevations. Nevertheless, it seemed improbable that we should find here monumental architectural remains such as those which characterized the sites of Akalan, Boğazköy, and Alaca Hüyük, as well as the North Syrian sites of Zincirli, Sakçagözü, and Carablus.⁷

¹ E. Chantre, *Recherches archéologiques dans l'Asie occidentale. Mission en Cappadoce 1893-1894* (Paris, 1898) pp. 65-69.

² H. Grothe, *Meine Vorderasiensexpedition 1906 und 1907* I (Leipzig, 1911) cclxxxii-cclxxxiv.

³ W. Belek in *Zeitschrift für Ethnologie* XXXIII (1901): *Verhandlungen*, pp. 489-500; Chantre, *op. cit.* pp. 71-91; Grothe, *op. cit.* pp. cclxxx-cclxxxii; H. Winekler, "Die im Sommer 1906 in Kleinasien ausgeführten Ausgrabungen," *Orientalistische Literaturzeitung* IX (1906) 621-34 (see cols. 633-34).

⁴ Bedřich Hrozný, "Rapport préliminaire sur les fouilles tchécoslovaques du Kultép (1925)," *Syria* VIII (1927) 1-12; preceded by his more popular accounts: "A 'Record Office' 4000 Years Old: New Materials for the History of Asia Minor's Earliest Civilisation," *Illustrated London News*, Oct. 2, 1926, pp. 600 f.; "The First Czechoslovak Excavations in the Near East," *The Central European Observer* IV (1926) 511-12 and 527-29; and his articles in *Panorama* III 4 (1926) and in *Prager Presse*, May 1, 1926.

⁵ Cf. *OIP* VI, chap. i, esp. pp. 7 ff.

⁶ Available for the study of Anatolian pottery at that time were: L. Curtius, "Kleine Funde aus Kleinasiens," in H. Grothe, *op. cit.* pp. cclxxv-cclxxxix (see pp. cclxxv-cclxxxvi); H. Frankfort, *Studies in Early Pottery of the Near East* I (London, 1924); H. de Genouillac, *Céramique cappadoceenne* (Musée du Louvre. Dépt. des antiquités orientales, *Série archéologique* I-II (Paris, 1926)); A. Körte, "Kleinasiatische Studien. IV," in *Mitteilungen des Kais. Deutschen archäologischen Instituts, Athenische Abteilung* XXIV (Athen, 1899) 1-45; G. and A. Körte, *Gordion. Ergebnisse der Ausgrabung im Jahre 1900* ("Jahrbuch des Kais. Deutschen archäologischen Instituts," 5. Ergänzungsheft [Berlin, 1904]); J. L. Myres, "The Early Pot-Fabrics of Asia Minor," *Journal of the Anthropological Institute of Great Britain and Ireland* XXXIII (London, 1903) 367-400.

⁷ Th. Macridy, "Une citadelle archaïque du Pont," *MVAG*, 12. Jahrg., No. 4 (1907); O. Puchstein unter Mitwirkung von H. Kohl und D. Krencker, *Boghasköi, die Bauwerke* (Deutsche Orient-Gesellschaft, "Wissenschaftliche Veröffentlichungen" XIX [Leipzig, 1912]); Th. Macridy, "La porte des sphinx à Euyuk," *MVAG*, 13. Jahrg., No. 3 (1908); Kgl. Museen zu Berlin, "Mittheilungen aus den orientalischen Sammlungen," Hefte 11-14: Orient-Comité, *Ausgrabungen in Sendschirli* I-IV (Berlin, 1893-1911); J. Garstang, "Excavations at Sakje-Geuzi, in North Syria. Preliminary Report for 1908," *AAA* I (1908) 97-117; "Second Interim Report on the Excavations at Sakje-Geuzi in North Syria, 1911," *AAA* V (1913) 63-72; *Carchemish: Report on the Excavations at Djerabis on Behalf of the British Museum*, Parts I-II (1914-21). For other excavations, especially since 1927, see *OIP* XXX, chap. ix.

THE ALIŞAR HÜYÜK, 1930-32

SEASON OF 1927

The main objective of the first season was to find out as much as possible about the structure of the Alışar mound and to prepare the ground for establishing a relative chronology of pottery, the framework for archeological investigation. As it was not yet assured that several seasons could be spent on such investigation, it was necessary to get material from the largest possible area without destroying any possibly important evidence which at that time we would not have been able to identify.

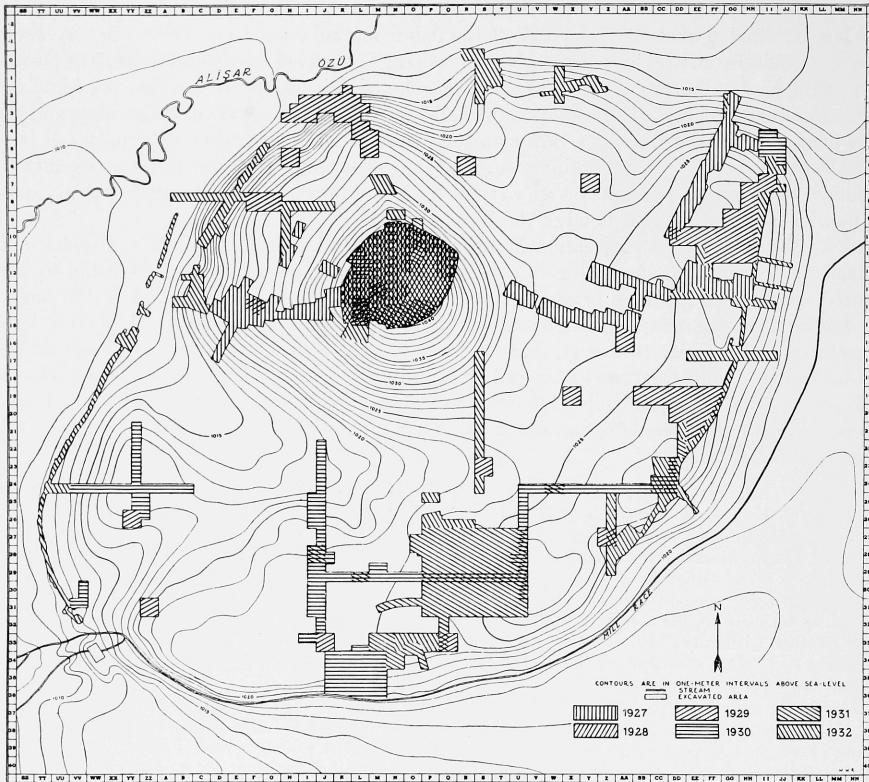


FIG. 1.—PLAN OF THE SITE, SHOWING THE EXCAVATIONS FROM 1927 TO 1932. SCALE, ABOUT 3:10,000

We sought to accomplish this aim by carefully excavating plots of irregular shapes, determined by the topography of the mound. These eventually formed two connected trench systems, one on the citadel mound with its western spurs, one on the northeast part of the city terrace (Figs. 1-2). In the meantime an accurate topographical survey of the site was started, so that at the end of the season we had an exact map on which the excavated area could be located. Three closed traverses were chained: one girdling the base of the citadel mound, the second connecting the salient points of the terrace, and the third encircling the entire site. The three closed traverses were then joined by chained lines connecting adjacent

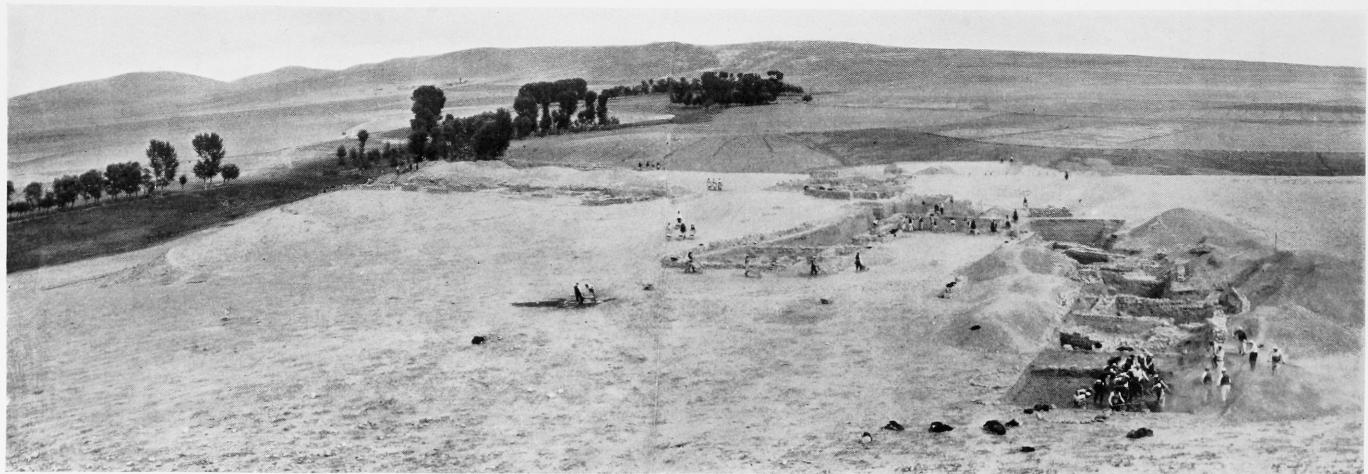


FIG. 2.—THE TRENCH SYSTEM OF 1927 ON THE NORTHEASTERN PART OF THE CITY TERRACE, SEEN FROM THE CITADEL MOUND

THE ALISHAR HÜYÜK, 1930-32

stations, thus forming a number of irregular polygons. The altitudes of the boundaries of the polygons were determined by differential leveling, and variations of altitudes in the inclosed areas were determined by stadia. We did not remove higher building remains in order to free lower ones, but left them *in situ*, going deeper only in architecturally unobstructed plots (Fig. 3). Through this method we hoped eventually to tie up these remains with larger complexes, to ascribe them to definite local culture levels, and then to ascribe these local levels to the cultural periods of Anatolia. Soon we had a large collection of pottery and numerous categories of small objects, the whole divisible at this stage into five main groups. In various places we then cut down small areas 1.50 meters square in layers of 17 centimeters (the length of a trowel

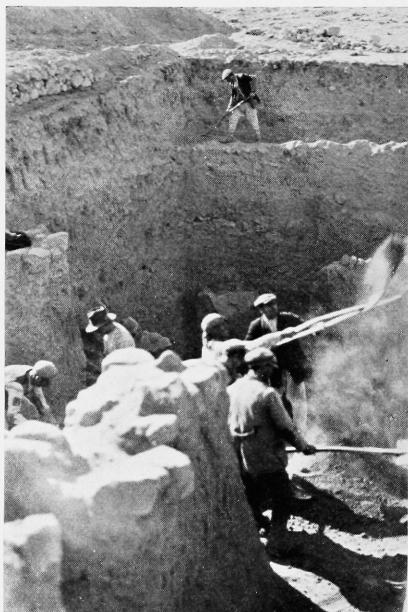


FIG. 3.—A TYPICAL PLOT OF THE 1927 EXCAVATION

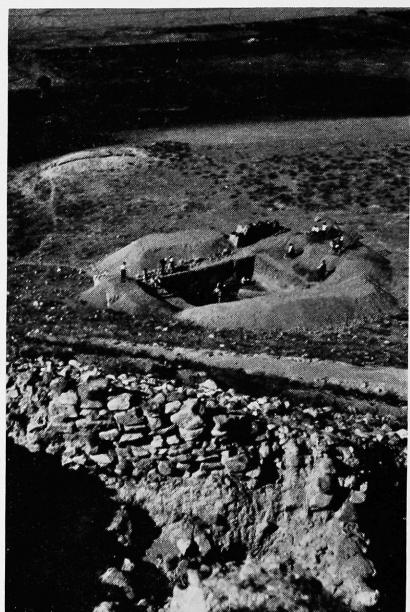


FIG. 4.—A TYPICAL TEST PLOT OF THE 1929 EXCAVATION

blade) to check and recheck the cultural sequence. In the northeastern part of the city terrace a plot 6 meters square was cut down in this way and the contents of each layer carefully registered.⁸ It is obvious that the results of such procedure have to be taken always with a grain of salt, as in such a relatively small area one cultural layer may be missing or disturbed. It was, in fact, the results obtained in this very plot in 1927 which started us off on the dubious theory that the handmade painted pottery was later than the first monochrome wheelmade ware.⁹

In excavating these irregularly shaped plots we came in three places upon remains of large fortifications. On the southwestern spur of the citadel mound we found a defense wall with two towers,¹⁰ but we could not follow it up, as that would have necessitated the removal of

⁸ *OIP* VI 214 ff.

⁹ *OIP* VI 244; *OIP* XIX 109 and 194. Fritz Schachermeyr pointed out the danger of this method in his very instructive review of *OIP* VI in *Archiv für Orientforschung* VII (1931/32) 200 f.

¹⁰ Cf. *OIP* VI 45 (Map 3) and 195-99 and *OIP* XXIX 332.

many structural remains which were superimposed upon it. Continuing from there eastward, we soon struck a large fortification wall surrounding the top of the citadel mound.¹¹ We cleared about two-thirds of the top of the mound, but time did not permit us to clear or investigate it completely. Finally, at the northeast corner of the city terrace we unearthed part of a postern.¹² This too the shortness of our season prevented our freeing completely.

SEASON OF 1928

In 1928, our second season, the Director of the Oriental Institute resolved to continue the excavations at the Alişar mound more thoroughly. Therefore we laid out over the area a grid system of 10-meter squares and started to cut down the citadel mound layer by layer,



FIG. 5.—A LARGE UNIT OF THE 1929 EXCAVATION: COMPLEX I, LEVEL 2

hoping to bare as a whole the building level of the large citadel wall which we had struck in 1927. It was, from a purely technical point of view, a very difficult piece of work. The upper layers were very thin and unexpectedly fragmentary, the edges having been for the most part washed down by the heavy spring and fall rains. Two main building layers (Levels 1–2 M),¹³ one of which could be subdivided (Levels 2a–b), were removed entirely in freeing a settlement (Levels 3a–b M) which apparently dated from about the middle of the first millennium B.C. We then cut down two-thirds of the area to the next level (4a M), which we thought belonged

¹¹ Cf. *OIP* VI 45 (Map 3) and 199–213.

¹² Cf. *OIP* VI 180–90 and *OIP* XXIX 7–8.

¹³ Levels on the citadel mound and those on the terrace are now numbered in two independent series (cf. Pl. X). The series to which a level belongs is designated by M ("mound") or T ("terrace") following the number. The present level numbers do not always agree with those used in previous reports (cf. Fig. 281).



FIG. 6.—THE TRENCH SYSTEM OF 1930 ON THE SOUTHERN P

to the New Hittite Empire fortress. We finished clearing the circumference of the citadel wall also.¹⁴ The plans of the interior of the fortress were very complicated and not at all clear. It was evident that rebuildings had taken place frequently within the wall, which, as we recognized, had been built originally by the people who used handmade painted ware (Early Bronze Age),¹⁵ then partially remodeled by later inhabitants. In the founders of the fortress we thought we recognized the ancient Hittites. A more detailed investigation and clearing of the fortification wall could not be made at the time.

SEASON OF 1929

In 1929, under the direction of Dr. E. F. Schmidt, 10-meter test squares (Fig. 4) were excavated here and there over the mound in order to define the extent of the settlements in the various cultural periods and to locate the areas in which cuneiform records were most likely to be found. These plots were enlarged when important architectural remains were struck and time permitted (Figs. 1 and 5). Thus on the northernmost spur of the citadel mound were unearthed large parts of an imposing fortification of the beginning of the first millennium B.C.,¹⁶ to which belonged the defense wall found in 1927 on the southwestern spur. The excavation of L 14–15 on the citadel mound was carried down through five building levels of the Copper Age.¹⁷ But the most important finds were made on the eastern part of the city terrace, where two building complexes (one of which Dr. Schmidt called a "community storehouse") belonging to the most important cultural period of the mound were freed.¹⁸ We now believe that this period was that of the Hittite Empires. Two fragmentary cuneiform tablets were found in this layer.¹⁹ On account of them, and because of the similarity of the pottery to that found at Kültepe, this period could be accepted as at least partly contemporaneous with the merchant colony there; and Dr. Schmidt was inclined to ascribe the whole culture to such alien merchants.²⁰

SEASON OF 1930

In 1930, our fourth season, we investigated the layers of this particular period. Complying with the instructions of the Director of the Oriental Institute, we sought especially for more cuneiform tablets, that is, *written* historical evidence. The two cuneiform tablet fragments of

¹⁴ Cf. *OIP* XIX 216–37 and *OIP* XX 5–19 and 92.

¹⁵ *OIP* XIX 231.

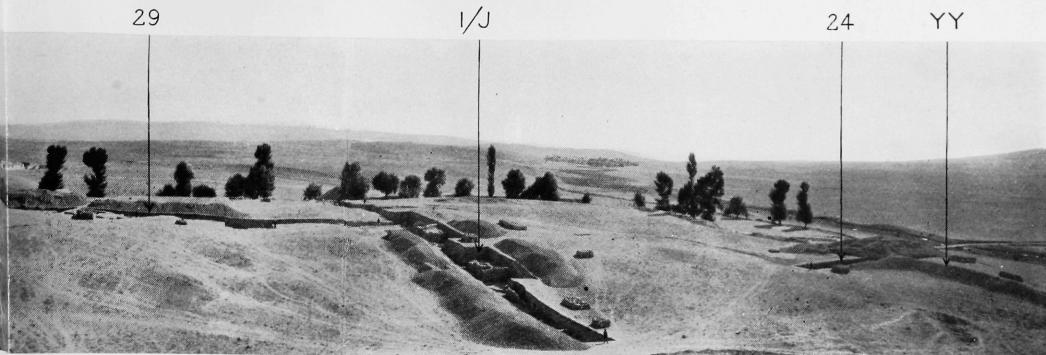
¹⁶ Cf. *OIP* XX 19–40 and *OIP* XXIX 328.

¹⁷ *OIP* XIX 33–41.

¹⁸ Cf. *OIP* XIX 81–105 and *OIP* XXIX 5–6, 14, and 22–24.

¹⁹ Cf. *OIP* XIX 140–42 and *OIP* XXIX 108.

²⁰ Cf. *OIC* No. 11, p. 70.



PART OF THE CITY TERRACE, SEEN FROM THE CITADEL MOUND

1929 had been found not *in situ* but in refuse layers. Our first objective was to find, if possible, such tablets *in situ*, in order to know definitely in which particular layer to continue our search.

It was a difficult task in view of the extent of this level and the practical difficulties of working through the superimposed layers of later cultural periods, which had to be conscientiously recorded before they could be removed. Hand in hand with this task had to go a renewed checking of the cultural sequence and of the extent of the later cultures of the mound. For this reason we turned to the southern part of the city terrace, where, up to now, the least work had been done. We laid out a system of three north-south trenches, which we planned to connect with one another by east-west trenches (Figs. 1 and 6). The trenches were 5 meters in width, but were enlarged if building remains within them or other reasons warranted. For our purposes such a trench system seemed to have advantages over the method of excavating separate plots. It is quite possible that one may strike disturbed layers, imperfectly defined because of destruction and partial re-use or rebuilding of wall fragments. In a limited area, such as 10×10 meters, the profile surfaces are too small to permit clear "reading"; but if one has a profile wall approximately 100 meters long, one can easily follow a cultural layer even through obscure sections, as there are usually clearly defined foundation or destruction levels on each side of the obscure stretch. It was our aim to excavate the entire length of these trenches to the oldest building layer of the Hittite period, by which we mean regularly the period of the two Hittite Empires in Asia Minor, that is, from near the end of the third millennium to about 1200 B.C.; however, in two places we went deeper, to the Copper Age, and in other places we were prevented by lack of time from slicing deep enough. In the southern part of the terrace (J-M 33-35) we found a gateway of the Hittite period. One plot was excavated in the interior of the citadel to determine the possible presence there of a layer of the Hittite period, and some additional work was done at the postern at the northeast corner of the city terrace. The deep shaft in L 14-15, started in 1929, was continued through the deposit of the Copper Age into the Chalcolithic layers.

SEASON OF 1931

Plans for the excavation work of the fifth season, 1931, were based on the results of our finds in 1930. In P-R 29 we had found two fragmentary cuneiform tablets definitely associated with the deposits of the Hittite Empires; not far from the find-spots of the tablets were large stone walls of an apparently important building (Fig. 7). Therefore we excavated a 50×60-meter area (Figs. 1 and 8), through the middle of which ran our trench of 1930. Level by

level this area was sliced down, starting from the middle and working toward both north and south sides in sections of 10×60 meters. A 5-meter trench in Q 32, connecting this large area with the test plot Q 33 of 1929, was excavated in the search for a city wall, the presence of

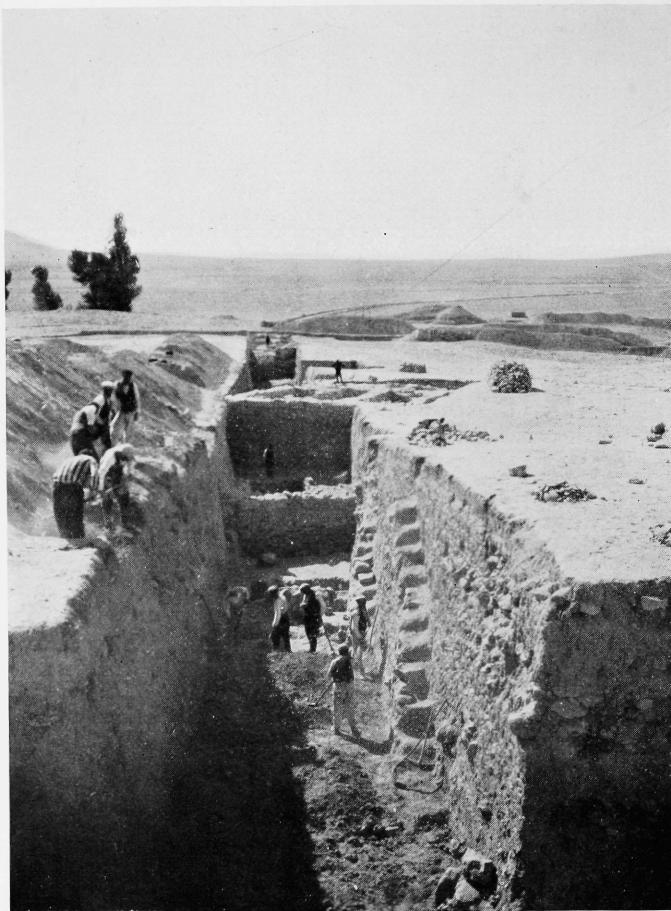


FIG. 7.—WALLS OF A "MANSION" OF THE HITTITE PERIOD IN Q-R 29, AS DISCOVERED BENEATH LATER STRUCTURES IN 1930, SEEN FROM EAST

which had been suspected since the finding of the large gateway structure in J-M 33-35. A north-south trench in O 10-11, cut through the northern part of the citadel wall, showed that the mound had already been fortified during the Copper Age. The gateway of the citadel wall in M-O 14-15 was excavated, showing several building levels. Besides a number of cuneiform tablets, large groups of small objects and of pottery were found during this season; they were associated conclusively with the various building levels, thus permitting us to ascribe these levels to definite cultural periods.



FIG. 8.—THE EXCAVATION OF P-U 27-31 IN 1931, SEEN FROM NORTHEAST

SEASON OF 1932

At the beginning of the season of 1932 the Oriental Institute program of field researches began to feel the results of the economic depression more seriously and I was therefore notified that the Institute would, after this season, have to suspend the work of the Anatolian Expedition indefinitely. It was obvious that the systematic investigation of the mound would have to be discontinued, and we were confronted with the difficult task of deciding which of the many problems should be given preference in the effort to bring at least some of them to a tentative conclusion.

One of our aims was to excavate the interior of the citadel down to the base level of the large fortification wall, in the hope of solving the intricate relation between the wheelmade monochrome ware of the Hittite period and the handmade painted pottery. We were not able to accomplish this aim because of technical reasons. Continuous strong winds permitted only a small crew to work on top of the mound; nevertheless Levels 4a-c M were freed, giving us complete plans of three successive post-Hittite fortifications. However, the level in which the large fortification wall was built still remains 2 meters beneath the last level freed. Only the form of its gateway, which was excavated in 1931, and two small sections of the wall are known to us in their original form.

A second problem was to free the entire circumference of the lower fortress on the western spurs of the mound, parts of which had been uncovered in 1927 and 1929. When this task was accomplished, we had a complete plan of this Phrygian fortress, with the exception of the parts which had been destroyed without leaving any traces (cf. Fig. 1). Closely associated with this problem was the linking of the areas excavated in 1927 on the southwestern spur of the citadel mound with the cultural levels inside this fortification. We were able to assign these levels to definite culture periods after the investigations of 1929 and 1932. For this purpose an east-west trench in H-J 8 was first excavated down to the Phrygian layer, and then a north-south trench was connected to it. Unfortunately we were not able to continue the latter far enough south to reach the excavated areas of 1927 (cf. Fig. 1). Nevertheless, the two trenches gave sufficient information to make possible a classification of some building remains in the areas of the 1927 excavation on the western extension of the citadel mound.

Our main project was to investigate as completely as possible the city wall of the Hittite period, the existence of which had been suspected since 1930. For this purpose we continued a 1930 trench westward through TT-UU 24 until we struck the fortification, which we then followed northward (Fig. 9) and southward. A similar east-west trench was excavated in A-E 8 to establish the relationship between the outer defense wall of the Hittite period and the Phrygian lower fortress.

On the eastern part of the mound we excavated an east-west trench in EE-II 17. From it we followed the outer defense wall northward through the partly excavated areas of 1927 and 1929 to the postern and southward to EE 25. South of this wall we freed part of the Copper Age outer defense wall, joining in Z 28 a trench excavated earlier in 1932. In order to investigate the northern part of the inclosure we attacked the area R-T 0-2, striking a very complicated gateway structure which time and funds did not permit us to clear completely. East of it the city wall had almost disappeared, leaving only scanty remains in W-Y 1-2. We had no time to follow it toward the west. Even though the whole circumference had not been freed, we had gained some idea of the extent and strength of this fortification.

As one can readily understand, these three projects demanded nearly all our resources—funds, time, and personnel. Nevertheless we were able to tie up a few test plots of 1929 and the greater part of the 1927 excavation on the northeastern section of the city terrace with our

definitely established culture levels. We are now in possession of level maps of the entire mound. These are very important for subsequent excavations, for the excavated areas deteriorate so quickly on account of the climate that, if such level maps were not available, later excavators would have great difficulty in tying up their finds with previously unearthened levels.



FIG. 9.—TRACING THE WALL OF THE HITTITE CITY ON THE WEST SIDE OF THE TERRACE IN 1932. VIEW FROM SOUTH

EXCAVATION METHODS

The areas excavated in 1927 had been staked out in accordance with surface indications. As a result the plots of 1927 were irregular in shape. Those on the citadel mound and its spurs were designated by Arabic numerals; those on the terrace, by Roman numerals. In 1928 a base line, its ends marked by concrete monuments, was established on the southern part of the city terrace. Thereafter plot corners were staked out by use of a transit with reference to that base line. The resulting 10×10-meter plots were numbered according to their co-ordinates (A 2 etc.). A map correlating the early plots with the later net will be found at the end of this volume (Fig. 280).

The excavated earth was thrown to one side, leaving a path 1 meter wide between the border of the excavation and the beginning of the soil heap. This was done to prevent such soil as could not be hauled to the dump from washing down into the excavations during the off-



FIG. 10.—A TRENCH IN I-J22-33, FROM J22 SOUTHWARD



FIG. 11.—THE DUMP, SEEN FROM EAST-SOUTHEAST

seasons. The stones were thrown to the other side and piled into regular heaps. Besides facilitating the removal of the dump soil, this provided the peasants with much-needed building material and thus lessened the natural temptation to tear out stone walls within the excavated areas. Special care was always taken that the excavations were kept "clean"; that is, at the end of each day's work the potsherds were collected, the "dead" stones piled up, and the



FIG. 12.—APPLICANTS FOR WORK



FIG. 13.—WORKMEN HOMeward BOUND

path between excavations and dump soil cleared (Fig. 10). With the help of a narrow-gauge railway system, as much as possible of the excavated soil was dumped outside the actual site (Fig. 11).

When maximum digging operations were under way, between 250 and 300 men were employed. We recruited our workmen (Fig. 12) from the surrounding villages, from which they came to work every morning and to which they returned every evening (Fig. 13). However, about thirty of the men, who came from distant villages, built themselves barracks on the eastern slope of the mound; for these we furnished lumber and sheets of corrugated iron.



FIG. 14.—A LEVEL IN P-U 26 READY TO BE TORN OUT

These workmen returned to their homes only over the weekly holiday to get their food supplies. According to the custom of the land this holiday fell on Friday.

The dig was under the constant supervision of at least three staff members, of whom one was always either Mr. Reifenmüller or Mr. Scharer. The workmen were organized into crews of ten or fifteen men, of whom four to six were pickmen, the rest shovelers. One of the pickmen acted as foreman of the crew. Besides these, a crew of thirty-five men under two foremen operated the narrow-gauge railway, and several "specialists" were used: cleaners of *kerpiç* walls, menders of pots, chainmen, and water carriers. To each crew a definite area was assigned, usually on the basis of plots, which were the units for all recording. An exception, of course, was made for tracing of walls over larger areas. The foreman of each crew was responsible for having the work within a given area done according to instructions. No stone could be removed without orders of a staff member. When a skeleton was found, the staff anthropologist was notified immediately, and the skeleton was removed by staff members only. It was

also up to the foreman to see that all sherds and animal bones coming out of his plot were segregated and that all small objects found in the excavation were deposited in a box. In the case of important finds such as tablets, seals, and of course all pots, the foreman would not remove them without order of the staff member on duty.

Usually we tried to keep all walls and pavements intact until the foundations of the lowest walls of a level were actually cleared. Walls, pavements, etc. were carefully cleaned with brush and trowel. They were then mapped with the plane table and alidade at 1:100. If necessary, detail drawings and plans were made at 1:50 or even 1:10. In camp the architect redrew the map and the necessary cross-sections in ink; he then compared them once more with the actual remains. Photographs also were made (Fig. 14). Only after all this was done would the level be torn out and the process of excavation continued. When secondary walls or fragmentary pavements had to be removed before a level was completely excavated, they were photographed and mapped before they were torn out. On the map, where every stone was recorded to scale, the find-spots of all important objects (pots, tablets, etc.) were indicated (cf. Fig. 44); and an architectural description of the level was made. From this first plan a tracing was made on which the various building periods of the level were indicated by different crosshatchings.²¹ Level maps of the entire site, made in Chicago, were based on this material; and from the detailed architectural descriptions in the files of the Oriental Institute this report is compiled.

We used another method of mapping in special instances, as when we uncovered remains of charred wood in O 10-11. Two parallel measuring tapes, at right angles to a third in a horizontal plane, served as a stationary frame for a rectangular system of co-ordinates. A movable tape, always kept parallel to the third tape, completed the frame. Lateral movement of this fourth tape and the occasional use of a steel rule permitted determination of the exact position of any object within a reasonable area. Such maps were drawn on plotting paper ruled in millimeter squares.

HANDLING AND RECORDING OF OBJECTS FOUND

Objects found in the excavations were variously treated according to their nature. Each crew had to collect all the potsherds and animal bones and put them at a designated place near the plot in which they were working. Here such objects were sorted at least twice a day by a staff member, who selected interesting sherds—rims, bottoms, handles, and painted ware—and put them into paper bags on which the number of the plot and the date were written in the morning and the depth was added in the evening. The animal bones were collected in similarly labeled paper bags.

The foremen were responsible for seeing that all other objects found (except as stated below) were put into boxes placed always at the same spot where the sherds and animal bones were deposited. Twice a day these other objects too were collected by staff members, who first sorted them, putting the less important ones into bags with the selected sherds. Of the rest a list was made, plot by plot, their depths being carefully noted. The finder of each object was recorded, and small rewards were given at the end of each month. With the exception of coins, rewards were based upon the size of pieces, not upon their value. For small pieces such as beads—difficult to find—workmen received relatively greater rewards than for larger pieces. For coins we paid whatever we would ordinarily have had to pay if buying them from the peasants.

Whole pots were carefully cleaned *in situ*, photographed for the files (cf. Fig. 213), and mapped before being removed. Then the sherds of these pots were collected in either a paper bag or a box, on which the date, plot, and depth were indicated.

²¹ Cf. *OIP* XXIX, Pl. XVI.

Staff members cleaned, photographed, mapped, and described burials and other human skeletal materials before removing them. The skulls and fragments of skulls were packed separately from other bones. These boxes also were carefully labeled with date, plot, and depth.



FIG. 15.—THE SHERD YARD

We removed only two pot burials in their original form for exhibition purposes (cf. Figs. 138-39). The bones were first cleaned, then painted with acetone. The earth which could not be removed was drenched with paraffin. The lower part of each burial pot was strengthened with tape bands. The earth underneath was troweled away until wires leading from four posts



FIG. 16.—WASHING SHERDS



FIG. 17.—MENDING POTS

could be interwoven beneath the pot. Each burial was then placed in a suitable box filled with cotton. Afterward in camp the burial was covered with cotton, and a thick coat of plaster of Paris was poured over it.

Each evening the boxes of small objects, the paper bags of discarded objects and selected sherds, the bags of animal bones, and the loose sherds were brought down to camp. Pots, skeletons, and special pieces such as tablets were brought to camp immediately.

The loose sherds, carefully separated by plots, were roughly washed and then piled in the sherd yard in rows marked by stakes on which plot and depth were written. Each row con-

Q-28		GLYPTIC		Seal Cylinder, marble		AUG 9 - 1931	
X+	2235	STONE	WHORL	AE 1173-d	225		
X+	2236	STONE	WHORL	AE 1037-d	220		
X+	2237	STONE	WHORL	AE 1034-d	222		
W+	2238	STONE	OBJECT	AE 1031-d	239		
X+	2239	FAIENCE	BEAD	AE 1078-d	240		
X+	2240	BONE	BUTTON	AE 1045-d	242		
R-28		SHERD		grooved		300 - 310	
X+	2241	POTTERY	GLYPTIC	stamp seal		AE 1087-d	311
X+	2242	STONE	BEAD			AE 1096-d	317
X+	2243	FAIENCE	PIN	faience head			318
X+	2244	BRONZE	NEEDLE	label		AE 1000-d	319
X+	2245	BRONZE	GLYPTIC			AE 1135-d	323
VII/	2246	POTTERY				AE 1152-d	327
S-28		GLYPTIC		seal impression		380 - 385	
X+	2247	POTTERY	OBJECT	cone-shaped		AE 1037-d	381
X+	2248	POTTERY	BEAD				380
X+	2249	FAIENCE	PIN				381
X+	2250	BRONZE	NEEDLE				382
X+	2251	BRONZE	RING				383
X+	2252	BRONZE	PIN				384
X+	2253	LEAD	BLADE				385
P-29		PIN		AE 1093-d		386 - 460	
X+	2254	BRONZE	BLADE			AE 1012-d	387
X+	2255	BRONZE	EFFIGY				450
P-30		WHORL					460
X+	2256	POTTERY	WHORL			AE 1075-d	461
Dir.	2257	POTTERY	WHORL				462
X+	2258	STONE	HANDLE			AE 1033-d	463
X+	2259	BONE	OBJECT	cone-shaped		AE 1047-d	463
X+	2260	BRONZE	PIN			AE 997-d	465
X+	2261	BRONZE	PIN			AE 997-d	467
X+	2262	BRONZE	NEEDLE			AE 1133-d	469
M-33/34		POINT		(arrow head)		280 - 300	
X+	2263	POTTERY	POINT	With Skelet # 8 - X 32		AE 1032-d	285
X+	2264	STONE	POT			AE 637-d	287
X+	2265	BONE	POT			AE 1173-d	289
X+	2266	BONE	POT			AE 467-490-d	285
X+	2267					AE 869-d	285
X+	2268						285
M/N-33		GLYPTIC		seal impression		0 - 40	
U-31	2269	POTTERY				AE 1152-d	40
VII/1	2270	BRONZE	PIN	With Skelet # d - X 30			40
<i>Emm. Als</i>		v. do. after					

FIG. 18.—A PAGE OF THE FIELD CATALOGUE. SCALE, 4:7

sisted of one pile for bottom pieces, one for rim pieces, one for handles, one for body pieces, and one for special pieces such as strainers or painted sherds (Fig. 15). We searched these rows from time to time for pieces missing from particular pots. Certain pieces were selected for drawing and then stored. The remainder, after having been studied carefully, were piled together in a large heap which in spring we used as filling for our courtyard.

The sherds and other objects in the bags were washed carefully (Fig. 16). Then we selected the most important sherds, entered them as a group in the field catalogue, and later incorporated them into a sherd catalogue (cf. Fig. 25). These sherds were stored for further reference. The small objects which were not worth cataloguing were kept in boxes by groups and turned over to the Turkish government for storage.

Negative Number		THE ORIENTAL INSTITUTE		THE UNIVERSITY OF CHICAGO	
AE 420 d		ANATOLIAN EXPEDITION			
Date	Country			Site	
August 1931	Turkey			ALISHAR HUYUK	
Subject					
Impression d 2199					
Scale 2:1					
Made by		Slide Number	Publication		
H.S.			OIC No. 14, Fig. 45		
Remarks					
See also: AE 419 d and AE 1180 d.					

FIG. 19.—A NEGATIVE ENVELOPE. SCALE, 3:4

After the small objects which had come from the mound in boxes had been carefully cleaned and dried, numbers were given them corresponding to the entries in the field catalogue, where date, plot, depth, association, and one dimension were given (Fig. 18). Objects of the first season (1927) have only numbers for identification, whereas for succeeding years letters were prefixed to numbers (1928, "a"; 1929, "b"; 1930, "c"; etc.).

Pots, after being cleaned and mended, were catalogued in the same manner. It often happens that a pot has a number much higher than those of other objects found at the same time in the same plot and level, since it would be entered in the field catalogue a week or more later, according to the length of time it took to put it together (Fig. 17).

Skeletons were not entered in the field catalogue but were numbered in a separate series including an "X" (e.g., e X1) and listed in the scientific catalogue.

After being recorded in the field catalogue the objects were photographed. If feasible they

FIELD NUMBER c 2485	PERIOD A. V.	PLOT: S 29 LEVEL: 130-200 cm.	DESIGNATION Point	MATERIAL Bronze
DATE OF FINDING Aug. 23, 1930	LOCUS:	PHOTO HE 1412 c	DRAWING X	
DIMENSIONS l-44 w-13 dia. of shaft-7 mm.	DESCRIPTION Tubular shaft with two wings and one barb.			
CONDITION Complete	FINDSPOT AND ASSOCIATIONS			
FINAL DISPOSITION Ankara Museum	REMARKS AND BIBLIOGRAPHY			
THE ORIENTAL INSTITUTE THE UNIVERSITY OF CHICAGO ANATOLIAN EXPEDITION ALISHAR HUYUK SITE:				

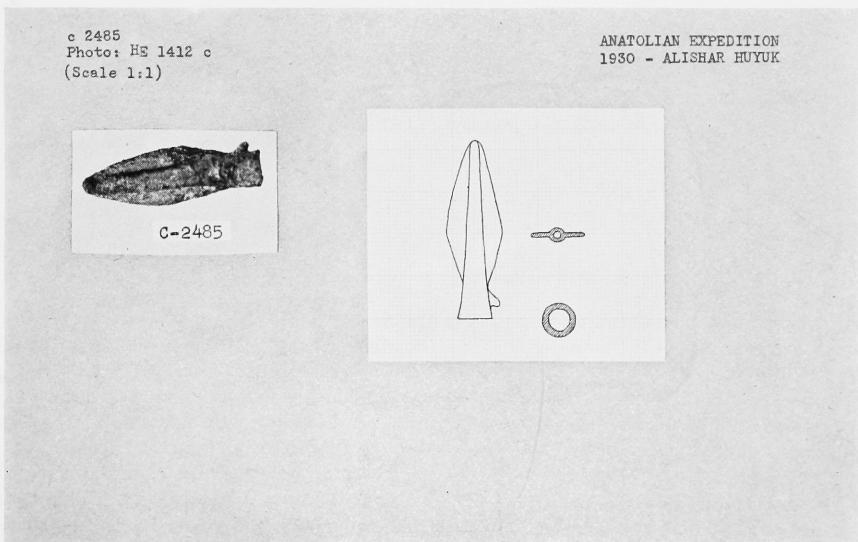


FIG. 20.—RECORD FORMS FOR SMALL OBJECTS. SCALE, 3:4

THE ALISHAR HÜYÜK, 1930-32

were photographed 1:1 or 1:2. Pots were photographed 1:5, 2:5, or 1:10. Usually at least two views were taken of an object, but in the case of pots or tablets as many as six pictures were taken. The films were developed in the darkroom which we had constructed in 1930, and whenever necessary prints were made. Here also maps and plans were copied.²² The negatives were returned with the objects and put into negative envelopes (Fig. 19) for filing. The numbers and subjects of all negatives were entered in the photographic catalogue, where the various groups were kept apart to facilitate reference work (e.g., 1-100, general pictures; 101-500, architecture; 501-600, skeletons). In Chicago these numbers were added after the entries in the field catalogue. Our negatives of 1927-30 were labeled with "HE," number, and letter designating the season; from 1931 on, with "AE," number, and letter.

Stone whorls. Serpentine. Conical, truncated, decorated by parallel incised lines.					ANATOLIAN EXPEDITION 1932 - ALISHAR HUYUK	
Photo: AE 1573 e						
Field No.	Dia.	Apert.	Thick.	Period	Plot	Date
e 1565	19	5	12		C-D 8	8-14-32
e 2000	15	6	11	Roman-Byzantine	H 10	8-30-32
e 2044	15	6	11		W 1	8-31-32
e 2265	20	4	13	Phrygian	J 8	9-14-32

FIG. 21.—RECORD FORM FOR GROUPS OF OBJECTS. SCALE, 3:4

Of the small objects, drawings or cross-sections also were made if necessary. Drawings and sometimes paintings of the pots were made. Then finally the objects were entered in the scientific catalogue. We used for this various forms. For each small object we usually used a printed white card 5×8 inches (12.7×20.3 centimeters). The photograph and the drawing (if any) were mounted on another card of the same size, which accompanied the printed form (Fig. 20). For certain categories of objects we made out group cards (Fig. 21). Pots and burials were registered in the same manner as the small objects, with the exception that the cards (Figs. 22-23) were 8½×11 inches (21.5×27.8 centimeters). Since 1930 the Turkish government has permitted us to take the skeletal material as a loan to Chicago, so that we could have it prepared and measured there. Nevertheless, whenever feasible we took craniological measurements in the field; these were recorded on a mimeographed blank 8½×11 inches (Fig. 24).

The potsherds were of the greatest importance, especially during the earlier years. The sherds from each plot were given a collective field number. For every sherd bag from each

²² The Ozalid process was used, as it was more exact and cheaper than the use of blue prints.

POT		ANATOLIAN EXPEDITION		SITE: ALISHAR HUYUK	
Field Number e 984	Period A II.	Plot S-0	Photo AE 1062-e		
Date of Finding July 21, 1932	Condition Complete	Level. 1.80 cm.	Drawing X		
		Locus: -----	Painting		
Height 49	Form	Technique	Degree of Firing		
Diameter Rim 45	Rim Cup	<input type="checkbox"/> Hand Made	<input type="checkbox"/> Heavily Fired		
Diameter Body 49		<input checked="" type="checkbox"/> Wheel Made	<input checked="" type="checkbox"/> Moderately Fired		
Diameter Bottom 9		<input type="checkbox"/> Grit Tempering	<input type="checkbox"/> Lightly Fired		
Thickness Rim 4	Handle 1	<input type="checkbox"/> Plant Tempering	<input type="checkbox"/> Warped		
Thickness Body 4		<input type="checkbox"/> Texture	<input type="checkbox"/> Workmanship		
Thickness Bottom 6		<input type="checkbox"/> Very Coarse	<input type="checkbox"/> Very Poorly Made		
		<input type="checkbox"/> Coarse	<input type="checkbox"/> Poorly Made		
		<input type="checkbox"/> Medium	<input type="checkbox"/> Fairly Well Made		
		<input type="checkbox"/> Fine	<input checked="" type="checkbox"/> Well Made		
		<input checked="" type="checkbox"/> Very Fine buff	<input type="checkbox"/> Very Well Made		
Finish					
<input type="checkbox"/> Rough	Buff ware with gray core.				
<input type="checkbox"/> Wet Smoothed	Very thin slip containing mica producing almost a glaze.				
<input type="checkbox"/> Wash					
<input checked="" type="checkbox"/> Slip					
<input type="checkbox"/> Burnish					
<input type="checkbox"/> Glaze					
Decoration					
Findspot and Associations					
In destruction level of the northern gate.					
Remarks and Bibliography					

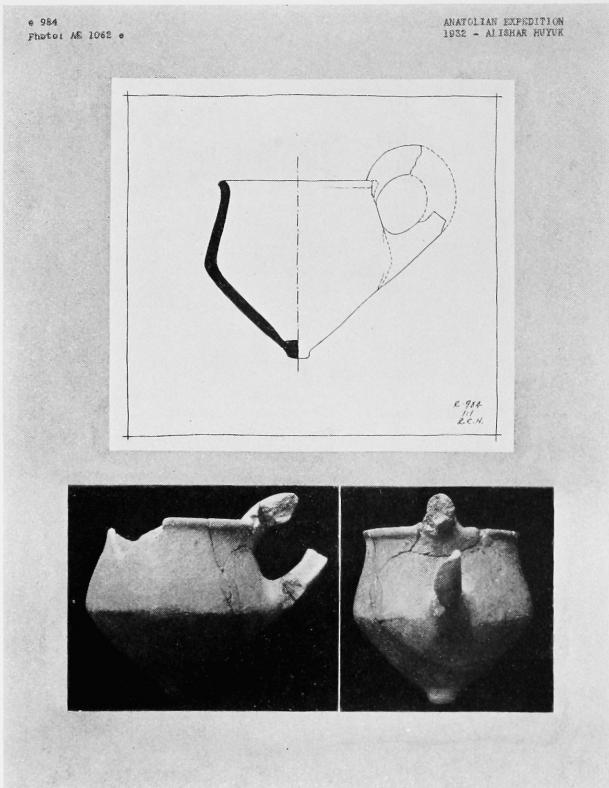


FIG. 22.—RECORD FORMS FOR POTS. SCALE, 1:2

BURIAL		ANATOLIAN EXPEDITION		SITE: ALISHAR HUYUK																																			
Skeleton Number d X32	Period A II.	Plot: M 34	Photo																																				
		Level: 320 cm.	AE 405 d AE 406 d																																				
Date of Finding August 10, 1931	Final Disposition Ankara	Locus:	Drawing																																				
Type of Burial Earth-cut	Direction (Sacrum to Atlas) 50° S of W.		Anthropometric X																																				
Position	Dorsal: arms folded, hands on breast; skull tilted forward.																																						
Preservation	Excellent; practically intact, and in fine condition.																																						
Disposition	<input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Milk																																						
	<table border="1"> <tr> <td>X</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>•</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> </tr> <tr> <td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> </tr> </table>					X	7	6	5	4	3	2	1	•	1	2	3	4	5	6	7	8	8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8
X	7	6	5	4	3	2	1	•	1	2	3	4	5	6	7	8																							
8	7	6	5	4	3	2	1		1	2	3	4	5	6	7	8																							
Findspot and Associations	Found near, and perhaps associated with, the tablet hoard. Let into the surface of a kerpitch floor.																																						
Mortuary Gifts	Pots, d 2267, d 2268; bronze needle d 2299; necklace, d 2300.																																						
Remarks and Bibliography																																							

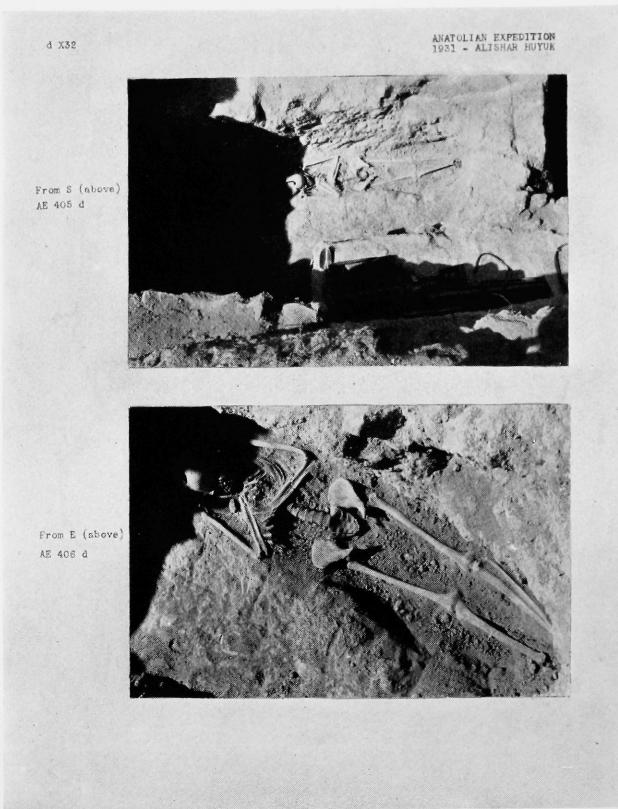
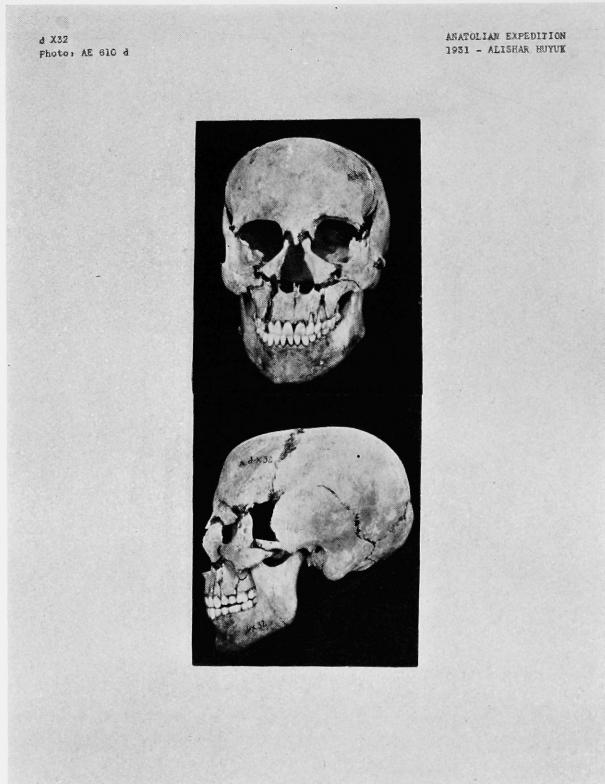


FIG. 23.—RECORD FORMS FOR BURIALS. SCALE, 1:2

<u>Craniological Measurements</u>	
Skeleton # d X32	Period II
	Sex: ♂
	Age: adult
gl-op.....	170 mm.
eu-eu.....	145
ba-b.....	?
ba-vertex.....	?
po-b.....	117
po-vertex.....	122
min. frontal breadth.....	100
zy-zy.....	122
middle face.....	99
ba-lm.....	?
ba-na.....	?
ba-pr.....	?
na-pr.....	72
na-gn.....	118
bi-orbital.....	95
inter-orbital.....	22
orbital width.....	41
orbital height.....	34
nasal height.....	53
nasal width.....	27
palatal length.....	?
palatal width.....	65
dental length.....	39
con-con.....	113.5
gon-gon.....	107
ramus height.....	62
ramus min. breadth.....	32
ramus angle.....	124°
gn-id.....	32

FIG. 24.—RECORD FORMS FOR SKULLS. SCALE, 1:2



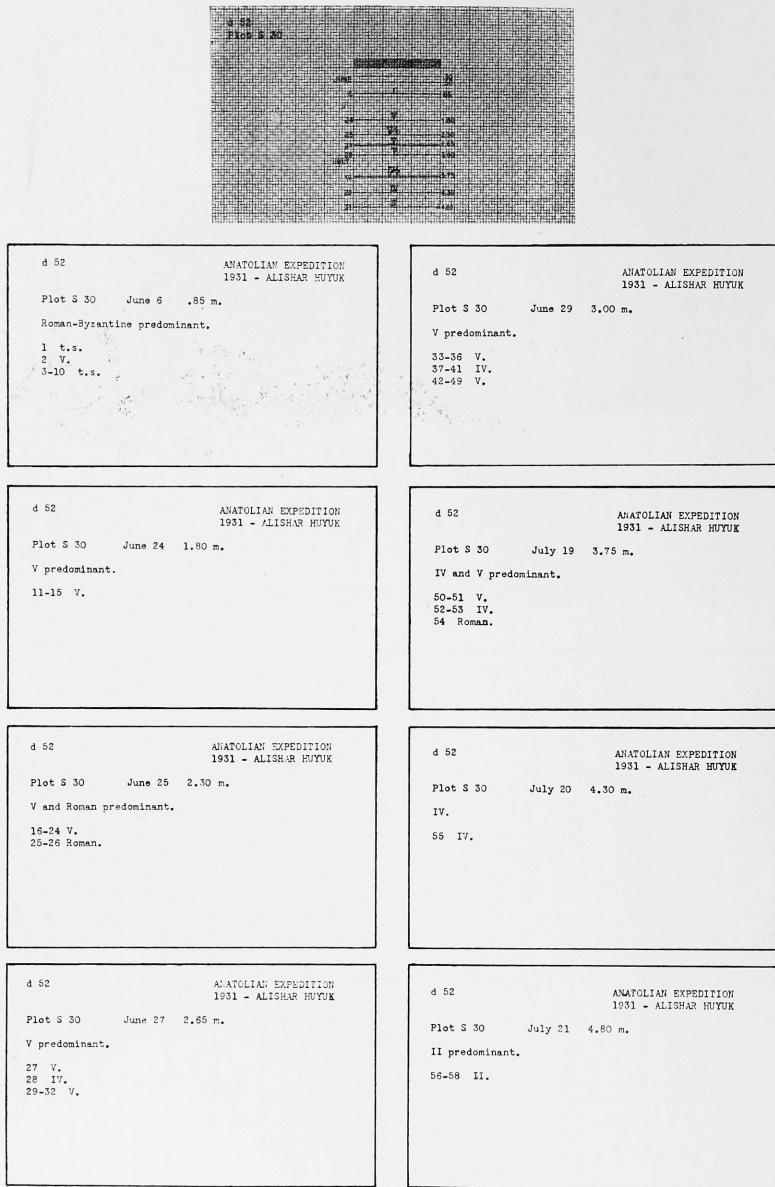


FIG. 25.—CARDS FROM THE SHERD CATALOGUE. SCALE, 1:2

plot a card was made out giving the collective field number, plot, date, depth, predominant type, and serial numbers of the most important sherds (Fig. 25). The latter were numbered individually and kept in a cardboard box on which the collective field number appeared; the others were put in the sherd yard. Later sherds coming out of the same plot were put into the



FIG. 26.—BOXES READY TO BE SHIPPED TO ANKARA



FIG. 27.—A HALL OF THE ANATOLIAN EXPEDITION IN THE ETHNOGRAPHICAL MUSEUM, ANKARA

same box after receiving their serial numbers. On the basis of the above described cards a card ruled in millimeter squares was made out for every plot, giving the predominant types of sherds at various depths. This permitted the definite assignment of architectural remains to the different cultural periods. As one will realize, this system was not necessary in every instance in the later years; but we still clung to it where there was any question as to identification of the levels.



FIG. 28.—FILES OF THE ANATOLIAN EXPEDITION IN THE ORIENTAL INSTITUTE, CHICAGO



FIG. 29.—WORKMEN TOSSED EARTH OUT OF A PLOT



FIG. 30.—THE "GALLows" ON THE CITADEL MOUND

All the excavated objects were shipped at the end of each season to Ankara (Fig. 26) and there transferred to the Turkish government in accordance with the law concerning antiquities. Selected objects were put on exhibition in the Ethnographical Museum (Fig. 27), and the rest were stored in Ankara by the Ministry of Public Instruction after a representative study collection had been selected for the Oriental Institute as a gift from the Turkish government. The Turkish government permitted us to borrow cuneiform tablets, coins, shells, and glass objects in order that they might be cleaned and studied by specialists in the United States. This borrowed material was returned to the Turkish government season by season. In addition to these, copper and bronze objects were given for analysis.

The records of the Anatolian Expedition—field, sherd, photographic, and scientific catalogues; architectural descriptions; maps; negatives—were taken after the completion of each year's work to Chicago, where they have been rechecked and comprehensively filed for permanent reference (Fig. 28).

The above described methods of excavation and registration were those generally used by the Anatolian Expedition. Exceptions were necessarily made when circumstances required them. For instance, in excavating the deepest layers of the Chalcolithic settlements we often had to smooth with trowel and broom the bottom of the excavation and moisten it in order to differentiate between the coloring of the soil and possible remains of mud walls. If necessary, the earth content of rooms was carefully screened. Generally the earth was thrown out with shovels (Fig. 29); when the wall of the plot became too high for this, the earth was thrown up from one setback to another. On the citadel mound the earth was sent downhill to the narrow-gauge railway in chutes. In some of the deep plots earth was brought to the surface by means of pulleys and buckets. But L 14-15 was so deep that the excavated earth was carried out in wheelbarrows through a passage cut for that purpose. The earth was heaped just outside the cut and was later taken by the narrow-gauge railway to the dump. When in 1932 we encountered a deep well on the citadel mound, a workman was lowered to the bottom every morning (Fig. 30), and the earth was brought to the surface in baskets.

In registration also we had to vary our methods. For example, in excavating the deep shaft of L 14-15 we used stakes in the walls of the plot to mark the depths at which particular objects were found. The painstaking registration of sherds was not always necessary in later years, when our knowledge of the pottery and small objects was greater. On the other hand, as the plots became deeper we were obliged to make profile drawings (Pl. X) as well as photographs of the plot walls. There were of course many other minor variations of our general methods, due to the constant appearance of new problems.

II

THE CHALCOLITHIC AGE

The presence of a culture earlier than that of the Copper Age on the Alişar mound had been suspected since 1927, when a sherd of coarse grayish ware with incised decoration¹ was found in CC 13 in an indistinct refuse layer .50-.70° above the original soil, associated with typical sherds of the Copper Age. Tentatively this sherd was described as Neolithic.² Investigation of the possible presence of such an earlier culture was undertaken in 1930. It was brought to a temporary conclusion in 1932 after being discontinued during the season of 1931 on account of the intensive work in the building levels of the period of the Hittite Empires on the city terrace.

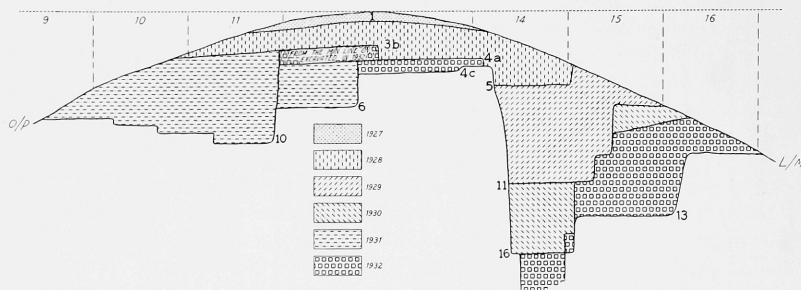


FIG. 31.—SECTION THROUGH THE CITADEL MOUND, SHOWING AREAS EXCAVATED FROM 1927 TO 1932. SCALE, 1:600

Evidence of an older culture was, of course, to be sought on the citadel mound, since on the city terrace the oldest building levels of the Copper Age lay more or less on virgin soil (cf. p. 110). In the deepening of plots L 14–15, started in 1928 and continued during 1929, we had penetrated eleven main building levels, counting from the top of the mound.⁴ The deepest layer then reached was Level 11c,⁵ at a depth of 17.60–18.00. While still belonging to the Copper Age, it showed already a sporadic admixture of sherds of a different and older type of pottery. This area was the obvious place for our investigation (cf. Fig. 33). In 1930 the excavation was carried down 7.60 farther to Level 16, and in 1932 it reached a final depth of 30.40 from the top of the mound (frontispiece and Pl. X). In addition, during 1932 the area of Levels 11c–13 was enlarged beyond the borders of L 14–15, and a step cut down from Level 13 to Level 16 gave us a new check on our finds of 1930 (Fig. 31).

The finds, especially the pottery, showed that between Levels 11c and 13 we have a definite

¹ No. 1876 (Fig. 66 28). See *OIP* VI 246 and Fig. 210.

² The word "meter(s)" is to be understood with all measurements.

³ *Archäologischer Anzeiger* XLVII (1932) 208–9; *OIC* No. 14, pp. 26–27.

⁴ *OIP* XIX 33–41 and 192–94.

⁵ Since this chapter deals with work on the mound only, the symbol M ("mound") is to be understood in all its references to levels.

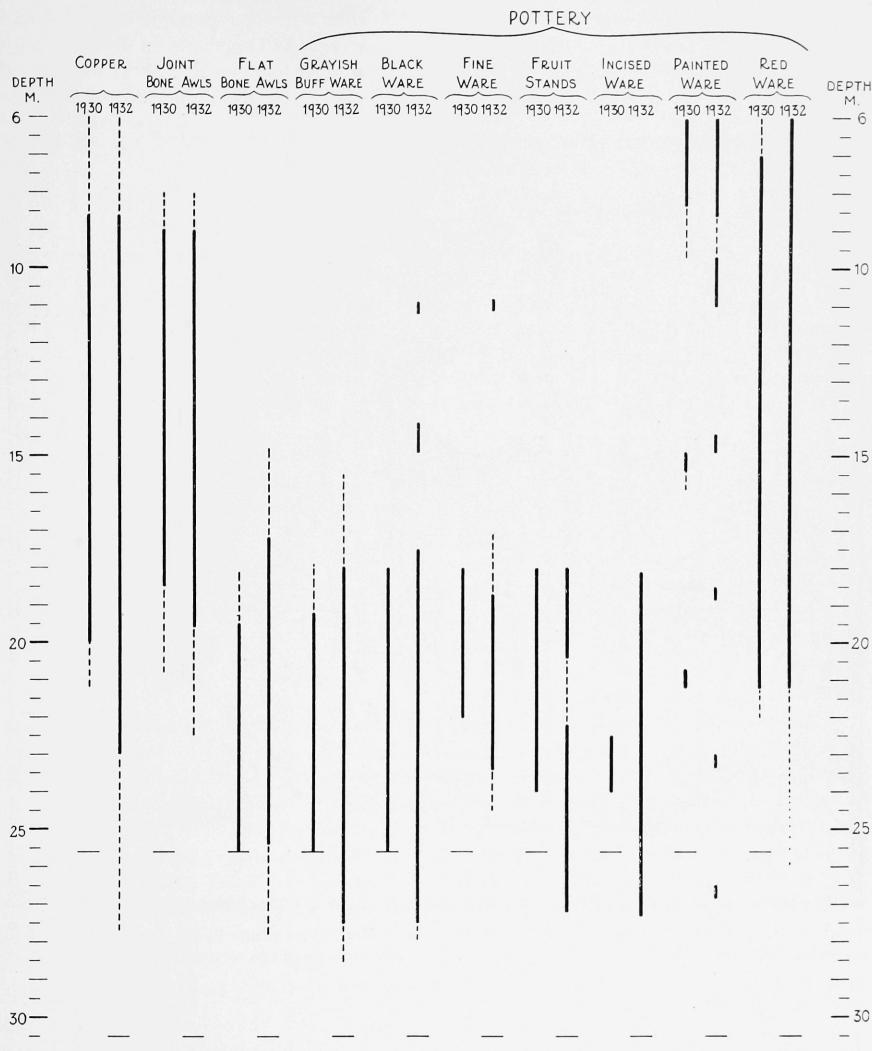


FIG. 32.—CHART SHOWING THE DISTRIBUTION OF POTTERY, BONE, AND COPPER IN THE EARLIER LEVELS OF L14-15, BASED ON THE RECORDS OF MR. R. A. MARTIN FOR 1930 AND OF DR. K. BITTEL FOR 1932. BROKEN LINES REPRESENT SPORADIC OCCURRENCES

change of culture. Although a certain overlapping occurs, in general a line between the two cultures may be drawn at a depth of about 18 meters (Fig. 32), corresponding to the depth of the foundations of Level 11c.⁶ Although in 1930 copper ceased to appear even in traces below a depth of 21.20 (Level 13), in 1932 we found traces of copper to a depth of 27.50, corresponding to Level 18. Therefore the designation "Neolithic," even for the earlier part of this older

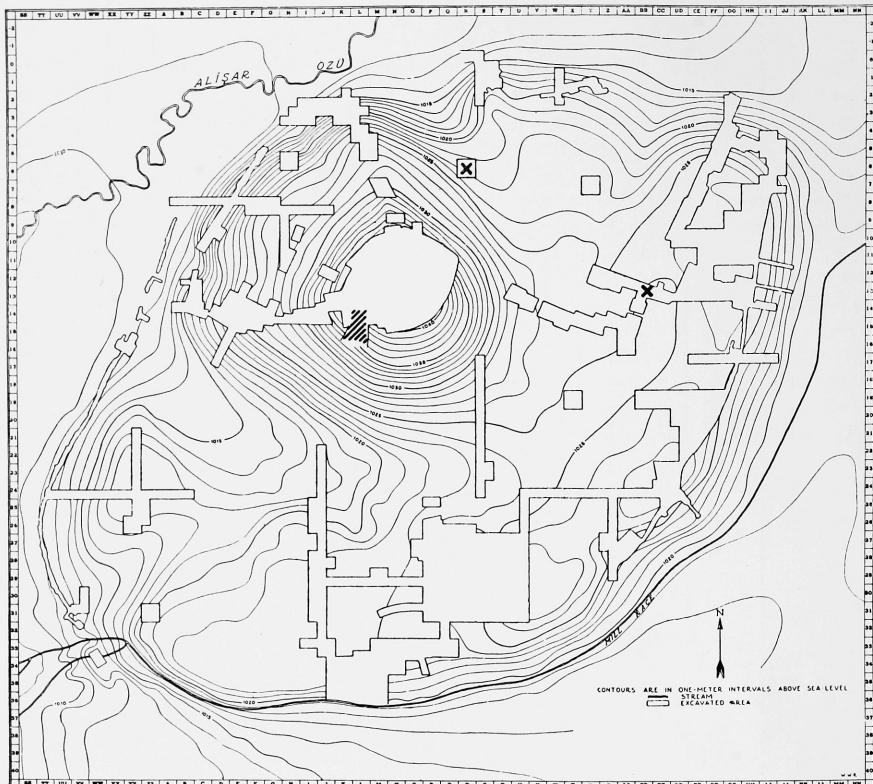


FIG. 33.—PLAN OF THE ALIŞAR MOUND, SHOWING DISTRIBUTION OF CHALCOLITHIC FINDS. HATCHING SHOWS THE EXCAVATED AREA; THE FIND-SPOTS OF TWO SHERDS ARE MARKED WITH X. SCALE, ABOUT 3:10,000

culture, is inaccurate, and the name "Chalcolithic" is henceforth used. To assign any definite date to the end or beginning of this period is impossible. Nevertheless its end probably falls within the first half of the third millennium B.C. and its beginning possibly within the second half of the fourth millennium B.C.⁷

⁶ Dr. Kurt Bittel, who knows the situation from careful studies *in situ*, prefers to attribute Levels 12-14 M to the Copper Age, which he would like to subdivide into an older "Alişar Ia," comprising our Levels 12-14 M, and a later "Alişar Ib," comprising our Levels 7-11c M and 13-14 T. See his *Prähistorische Forschung in Kleinasien* ("İstanbuler Forschungen" VI [İstanbul, 1934]) pp. 12-15 and 59-83. But at present I prefer to assign Levels 12-14 to the Chalcolithic period (cf. *OIP* XXX 408, n. 13).

⁷ Cf. *OIP* XXX 407.

Since it was necessary to carry on other excavations on the mound, it was not possible to assign to the excavation of L 14-15 a force sufficient to clear any considerable area at such a depth. The one incised Chalcolithic sherd found in 1927 in CC 13 (see above) and a second one found in 1929 in R 6⁸ (Figs. 33 and 66 31) must be considered as stray pieces, as neither of them was found in any distinct building layer. Therefore nothing definite can be said about the extent of the settlements of this period or whether they were fortified. However, it seems certain that they covered only a part of what later on, because of those settlements and their accumulations, became the citadel mound. Investigations conducted by Dr. Gerhart Bartsch of Hannover in 1930⁹ indicated that the flat upper part of the Pliocene valley in which the Alişar mound is situated was once a swamp or lake. Probably the oldest settlement was constructed on a slight elevation or island which was gradually enlarged and raised—artificially with earth and naturally by settlement accumulations and the lowering of the water level. The scanty building remains found within the limited area freed indicate only that the early settlers, as far as they lived in houses, built with walls meeting at approximately right angles. The material used was plant-tempered mud, either formed into bricks or simply piled up. No stone was used for foundations or walls. Of pit-dwellings or huts no traces were uncovered, although it is quite possible that the earliest settlements consisted of such abodes, built of reeds and branches.

For other phases of material culture we have, of course, more information. Pottery vessels show in general rather refined forms. A fine ware, still handmade but hardly less perfect in shaping and firing than the finest Phrygian and Hellenistic wares, may be an importation. The other household implements were usually made of stone, bone, and staghorn. Wooden objects were preserved in the deepest levels only. Copper was rarely found and, as far as can be determined, was not generally used for tools. It appears mostly in bracelets and earrings. One lead seal and two silver earrings were found also. Remains of woven fabrics and mats were uncovered in the burials. Agriculture was known, and sheep, goats, cattle, and pigs were used as domesticated animals. Burials are described in the next section (p. 32).

SETTLEMENT REMAINS AND BURIALS

The differentiation of building levels was in most cases extremely difficult, as very few actual building remains were found, and the refuse and débris were pressed into a mass resembling a layer cake with very thin layers (cf. Fig. 36). The contents of the various layers were much the same: pottery, animal bones, and small objects. Occasionally a thicker layer of grayish material appeared, composed of compressed ashes with particles of charred wood. Such layers probably indicate destruction by conflagration. Associated with three of the eight main levels which we distinguished in the Chalcolithic period of the Alişar mound were burials, mostly of children.

No comprehensive plan of a house or dwelling was found; none could indeed have been expected in view of the small area freed. Fragmentary parts of dwellings were struck in four levels. They did not tell us anything about plans, but at least they gave information regarding the material and technique with which these early settlers of the Alişar mound constructed their abodes. An important fact is that there were two types of wall construction during the Chalcolithic period. Besides regular mud-brick structures there were walls made simply by piling up handfuls of mud tempered with reeds, straw, or grass and afterward smoothing the surfaces by hand. Measurements of mud bricks could not be taken with any degree of accuracy, as they had been distorted by weathering and pressure. This is not surprising, for they

⁸ No. b 745:15. See *OIP* XIX 44 and Fig. 46.

⁹ Cf. *OIC* No. 14, pp. 48 and 94.

had not been fired but only sun-dried. As far as one can say now, no stone was used for either walls or foundations; stone for wall construction seems not to have been used earlier than the Copper Age. Of roofing no remains were found, but apparently wooden posts with stone bases were sometimes used to support the roofs. The floors seem to have consisted usually of lightly packed earth, small areas being tamped more carefully—probably for a special purpose such as threshing. Vestiges of what may have been a pavement were found in Level 18.

In the burials the bodies were generally flexed and lying on the right side, the head pointing in a westerly direction. The bodies were mostly of infants and children. In the case of six of the ten bodies belonging to Level 13, it can be definitely stated that they were buried within a house. Apparently only children were thus buried beneath house floors. Four types of burial appear: simple earth burials, burials in tilted pots, stone box burials, and one wooden box burial. Relatively few mortuary gifts were discovered. Besides small vessels they included objects of copper, of stone, and in one instance of silver. In Level 13 vestiges were found which suggest that the bodies had been wrapped in animal skins, woven fabrics, or mats.

At 28.30 from the top of the mound we found the top of a black bituminous layer with a few traces of charred material. This was the remains of the oldest settlement, Level 19. Its greatest thickness was approximately .70, and it consisted of many thin refuse layers compressed by the overlying earth and débris into an oleaginous flaky mass. A few bone splinters and potsherds were found within it, but no vestiges whatever of buildings. This layer was superimposed on a sterile clay with a few veins of gypsum. The clay layer sloped slightly upward toward the south, whereas the top of the modern mound above this point sloped upward toward the north. We dug about 1.40 into this clay without encountering any remains of human activity. The same kind of earth—the typical Pliocene deposit of this region—is common outside the mound, and it is quite possible that this earth is the original surface of the small elevation or island on which the oldest settlers built their dwellings. Its surface is 9.75 above the present ground water level, which most probably has fallen considerably since the time of the first settlement. There is, nevertheless, the possibility that even this earth was artificially heaped up; the slope upward toward the south may be part of an earthen wall, as the stratification of the thin layers of the settlement level is nearly horizontal. This question, of course, could only be settled by deeper excavation here and by an expansion of the area southward. Above 28.30 the black layer thins out and merges into a grayish layer which is less oleaginous, probably due to a greater content of ashes.

At 27.80 from the top of the mound, approximately 1.20 above the deepest point of Level 19, several stones were found in the southeastern corner of L 14 (Fig. 34). They appeared in an approximately horizontal layer and, since their flat sides were uppermost for the most part, may have belonged to a pavement. The profile of the plot walls showed definitely at the level of these stones the floor level of a settlement, Level 18. The deposit of settlement remains above the floor level was only .35-.45 thick. It resembled the deposit of Level 19, but was not quite so oleaginous. A little below the floor level the skeleton of an adult female (e X18) was found (Fig. 35), but there were no recognizable indications of its being an actual burial. Otherwise the contents of this level were much the same as those of Level 19; again no traces of buildings were found.

Upon this settlement layer followed an artificial earth and clay layer, .40-.60 deep, which was sterile. On top of it, 27 meters from the top of the mound, appeared another settlement layer, Level 17, very much like Level 19. A fragment of a staghorn ax (e 1992) was found in Level 17 (cf. Fig. 94).

Another distinct floor, Level 16, was found 1.40 farther up, 25.60 from the top of the mound. Here we uncovered two large flat stones 1.25 apart in a north-south line (Figs. 36-37). On

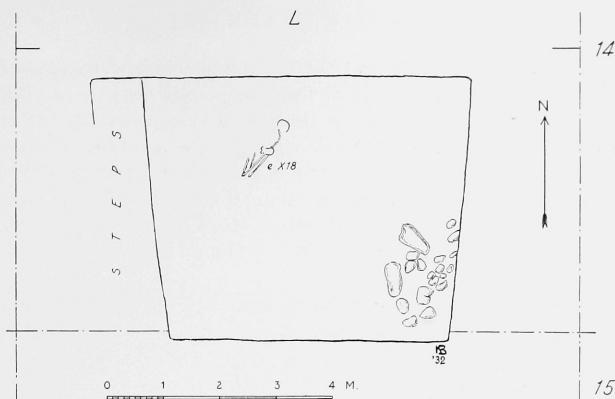


FIG. 34.—PLAN OF LEVEL 18 IN L 14. SCALE, 1:100

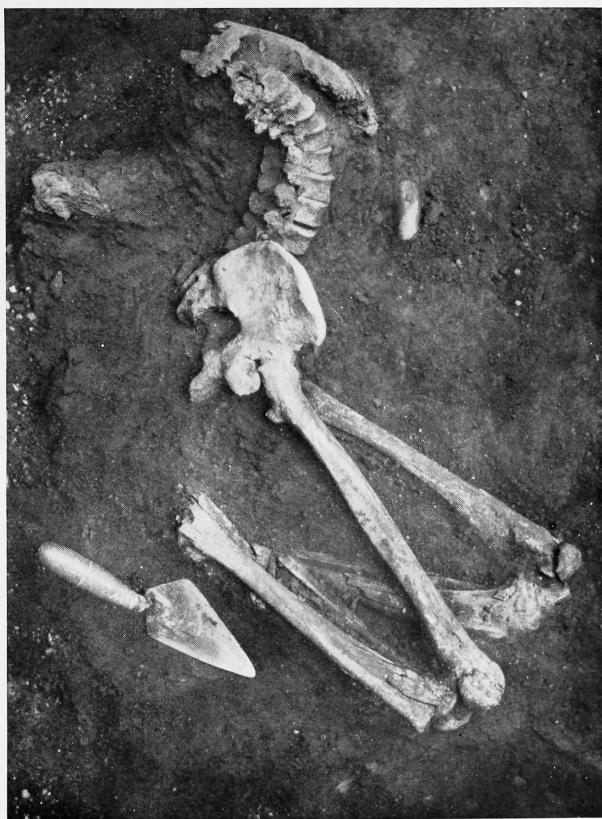


FIG. 35.—SKELETON e X18 OF LEVEL 18

the southern stone a piece of a wooden post .20 thick and .50 high was still standing (Fig. 36), and on the northern stone a blackened spot of approximately the same size indicated that a second post had stood there. Both posts were probably roof supports, but other clear remains of the house to which they had belonged were lacking. After smoothing the floor very carefully with trowels, we could distinguish a curving strip of yellowish white, clayey material (Fig. 38). The earth inside the curve was a little darker than that outside. This quadrant was overlapped by a second one which consisted of carboniferous matter with a large admixture of ashes. A small wooden post (about .30 preserved) was found near the inner edge of the clayey

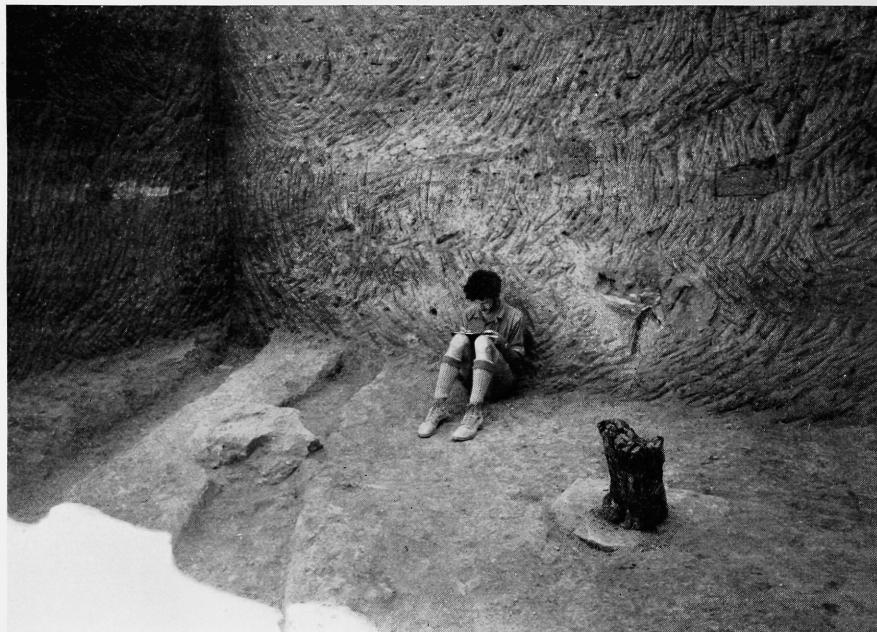


FIG. 36.—LEVEL 16 IN L 14, SHOWING A WOODEN POST ON A STONE BASE, WITH A SIMILAR STONE TO THE NORTH (AT LEFT). NOTE ON THE PLOT WALL THE STRATIFICATION OF THE REFUSE AND SETTLEMENT LAYERS

strip (Fig. 37). Whereas this floor level and the accumulation of refuse and débris immediately above it were approximately horizontal, the next higher ones showed again the tendency to slope up southward (cf. Fig. 36).

Figure 36 shows very well the accumulation of the refuse in distinct layers and how they have been compressed so that it is hard really to count them. Even if we could count them, the absence of actual building remains would make it doubtful whether we were dealing here with different settlement periods or solely with the gradual accumulation of débris and refuse from one settlement layer. The material with which these early settlers built their buildings and, as a matter of fact, with which the Anatolian peasant builds his house today makes the latter assumption the more probable. The heavy rains in fall and spring make repair of mud-brick houses necessary every year. It is not unusual today when one enters an Anatolian house, even if it is only a few years old, to step down one or two steps. Many modern villages

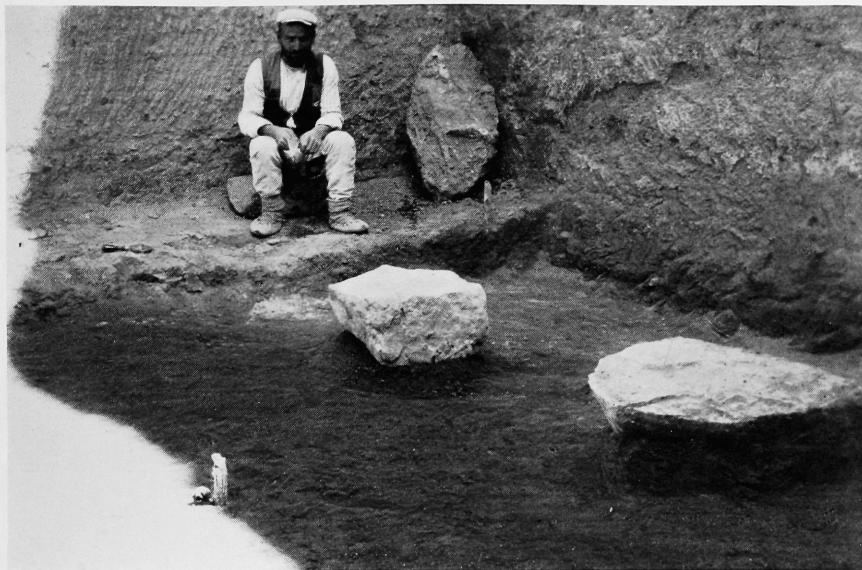


FIG. 37.—LEVEL 16, SHOWING THE TWO STONE BASES SEEN IN FIGURE 36 AND (IN LEFT FOREGROUND) A SMALL WOODEN POST

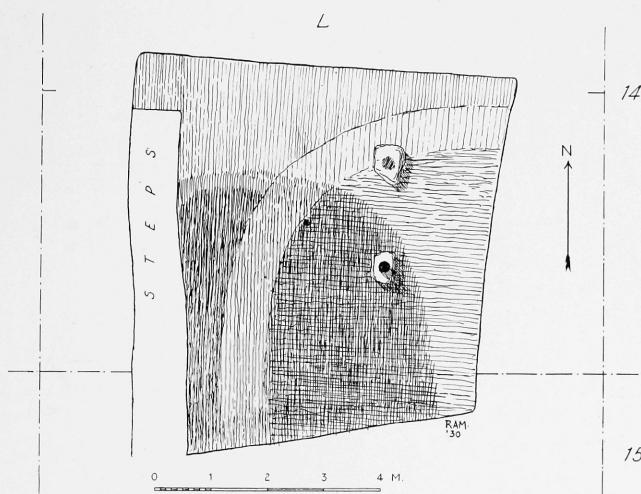


FIG. 38.—PLAN OF LEVEL 16 IN L 14-15. SCALE, 1:100

look like cave dwellings. This is usually due to the refuse accumulation outside the walls (Fig. 39) rather than to initial excavation. Observing the construction of new houses in Anatolian villages, I saw floors cut down into the original soil for only two reasons: (1) to



FIG. 39.—A HOUSE IN THE VILLAGE OF ALIŞAR

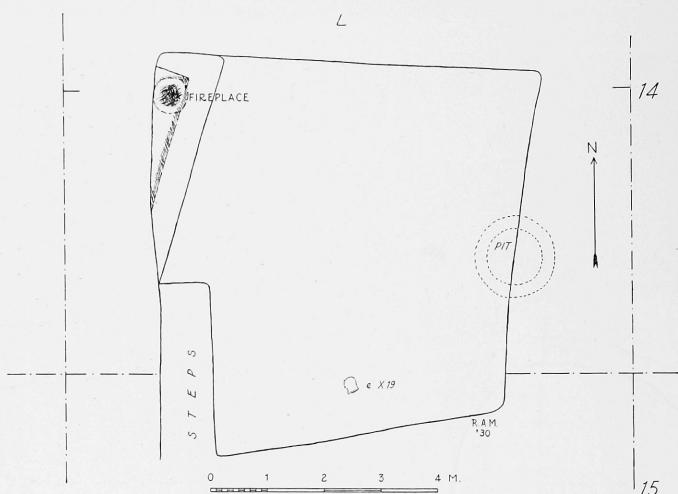


FIG. 40.—PLAN OF LEVEL 14 IN L14. SCALE, 1:100

level the ground roughly when the house was to be erected on a slope; (2) to construct special rooms as winter quarters (*kışlak*), which may be an extension of the main dwelling or a separate unit.¹⁰ Earth is heaped against the outside walls of such rooms and of the stables to retain heat.

¹⁰ Cf. *OIP* XXX 193-95.



FIG. 41.—CORNER OF A ROOM WITH FIREPLACE IN LEVEL 14



FIG. 42.—PIT LINED WITH MUD BRICKS IN LEVEL 14



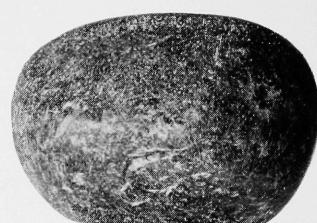
e 2238



e 2239



e 2240



e 2241



e 2236



e 2237

FIG. 43.—BURIAL e X19 OF LEVEL 14. THE MORTUARY GIFTS ARE SHOWN IN ACTUAL SIZE

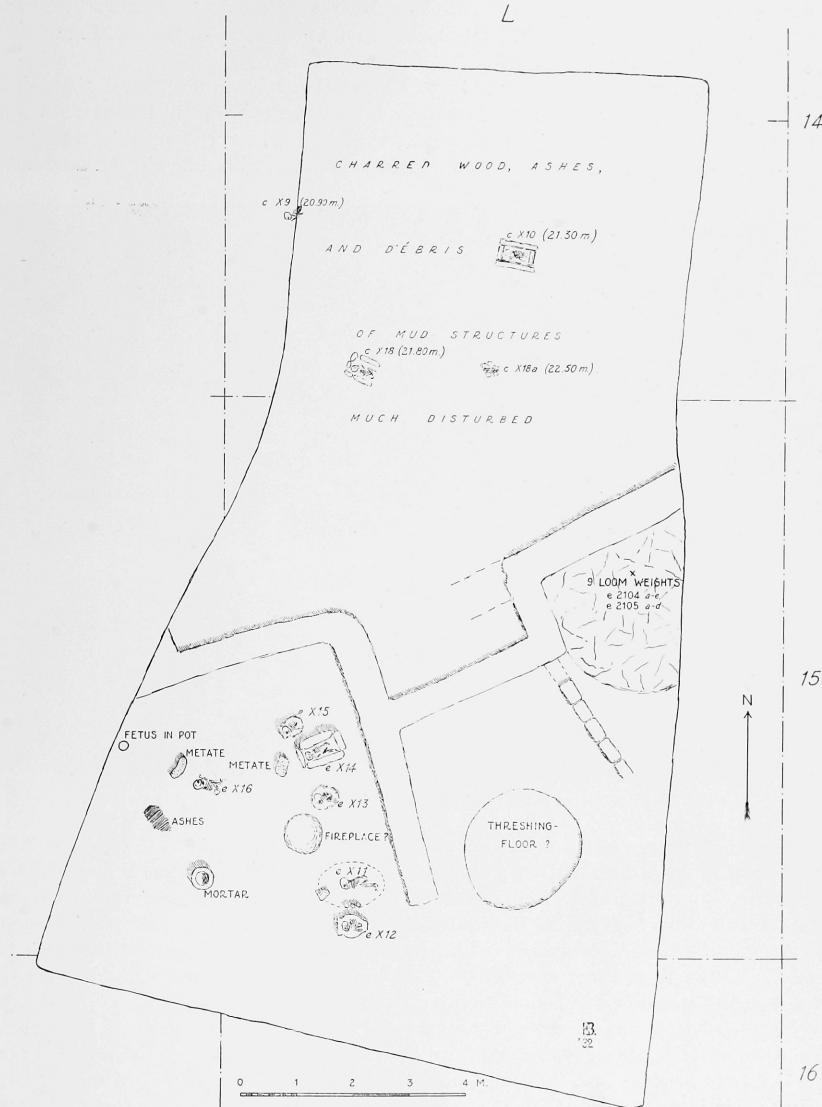


FIG. 44.—PLAN OF LEVEL 13 IN L14-16. SCALE, 1:100

At 24.80 below the surface Level 15 was distinctly marked by a thick burned layer with many remains of charred wood. From this level a refuse pit extended 2.60 downward, piercing Levels 16 and 17 and reaching into the artificial heap of earth between Levels 17 and 18. It showed evidence of two periods of use.

The next distinct building layer, Level 14, at 23.50, was again horizontal. Its distinguishing features were parts of two mud-brick walls preserved to a height of .35-.40, meeting at nearly a right angle near the west wall of the plot, and a fireplace in the corner formed by these walls (Figs. 40-41). Since the mud bricks were distinguishable only with difficulty on account of

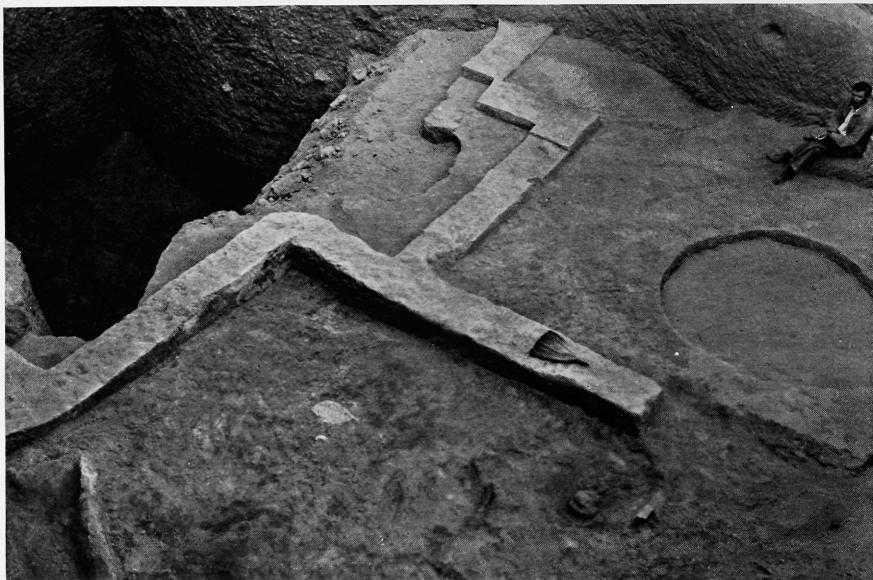


FIG. 45.—BUILDING REMAINS OF LEVEL 13 IN L15. LEVEL 16 IN BACKGROUND

the pressure, no measurements of them could be obtained. Belonging to the same building level was a pit .70 deep, lined with mud bricks and filled with ashes and other refuse, which we found only in profile on the east wall of the plot (Fig. 42). The Anatolian peasant of today uses such pits to store his wheat during the winter and afterward for refuse. This pit was almost exactly superimposed on the one in Level 15. In the refuse deposit of Level 14 the pot burial of a child (e X19) with rich mortuary gifts was found (Fig. 43). Above these building remains again were many thin layers of compressed refuse and building débris.

Level 13, 21.20 deep,¹¹ was in every respect the most important and instructive Chalcolithic level which we found (Figs. 44-46). We freed here a much larger area and were able to distinguish some features of buildings. The northern part of this area had been uncovered in 1930; but aside from four burials only charred wood, ashes, two irregular stone piles, and débris of much disturbed mud structures had been found (Fig. 47). In the southern part, freed in 1932, we were more fortunate. Smoothing the floor with trowel and broom we were soon

¹¹ Levels 12 and 13 were ascribed in 1930 to the Copper Age; see *OIC* No. 14, p. 23.

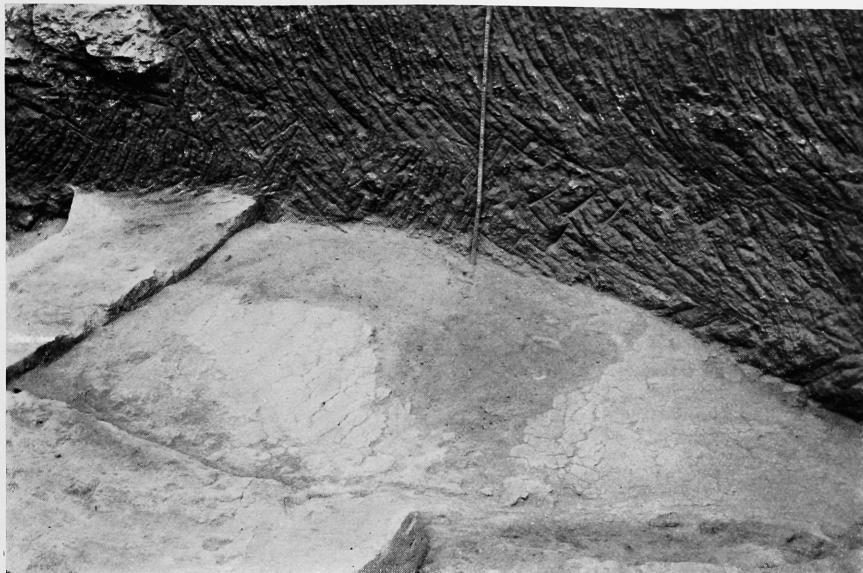


FIG. 46.—PACKED EARTH FLOOR IN NORTHEAST CORNER OF L15, LEVEL 13



FIG. 47.—THE AREA OF LEVEL 13 FREED IN 1930. LEVEL 11 IN BACKGROUND

able to distinguish remnants of a few walls meeting at approximately right angles, built by piling up handfuls of mud in the manner described on page 31. On the east side of the plot one layer of much deteriorated mud bricks seemed to have belonged to a partition inclosing a space of carefully packed earth (Figs. 44-46) on which lay nine loom weights of clay (e 2104a-e and e 2105a-d; see Fig. 99). Southwest of the partition wall was a nearly circular surface which was well packed and may have been a threshing-floor. On the west side of the plot appeared

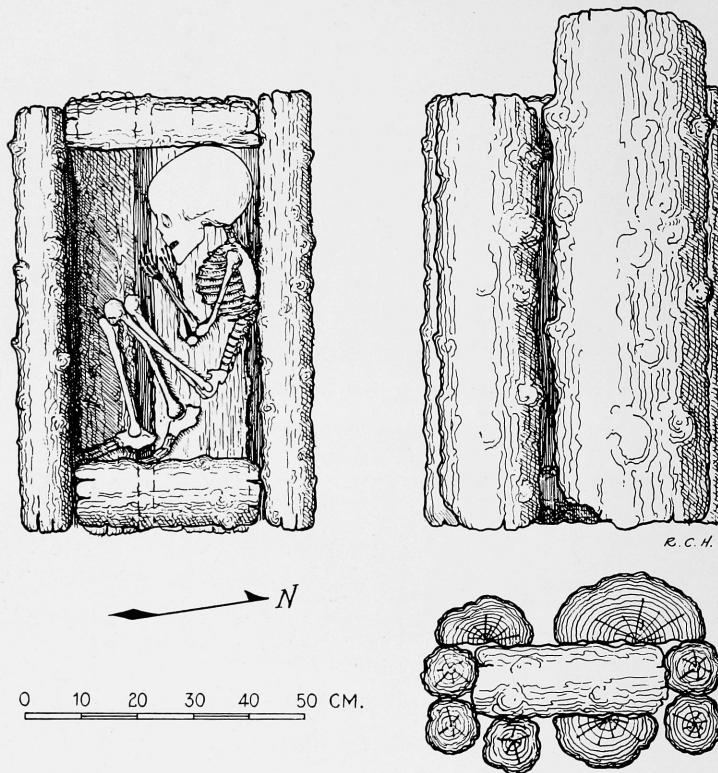


FIG. 48.—RECONSTRUCTION OF WOODEN BOX BURIAL c X10 OF LEVEL 13. SCALE, 1:10

part of a large room which seemed to have been the main living-room. Besides a great number of potsherds, stone and bone implements, charred wood, and animal bones, a fireplace was found; and a mortar and two basalt hand mills (metates) still remained where they had stood when this house was deserted.

Much more interesting were the burials, of which we found six just a few centimeters below the floor level of the room and four seemingly outside the house from about the floor level to 1.30 deeper. They were burials of children, with the exception of two (c X9 and c X18, both outside the house) which were adults. Three were earth burials (c X9, Fig. 49; e X11, Fig. 51; e X16, Fig. 61); four were pot burials (c X18a, Fig. 50; e X12, Fig. 52; e X13, Fig. 53;

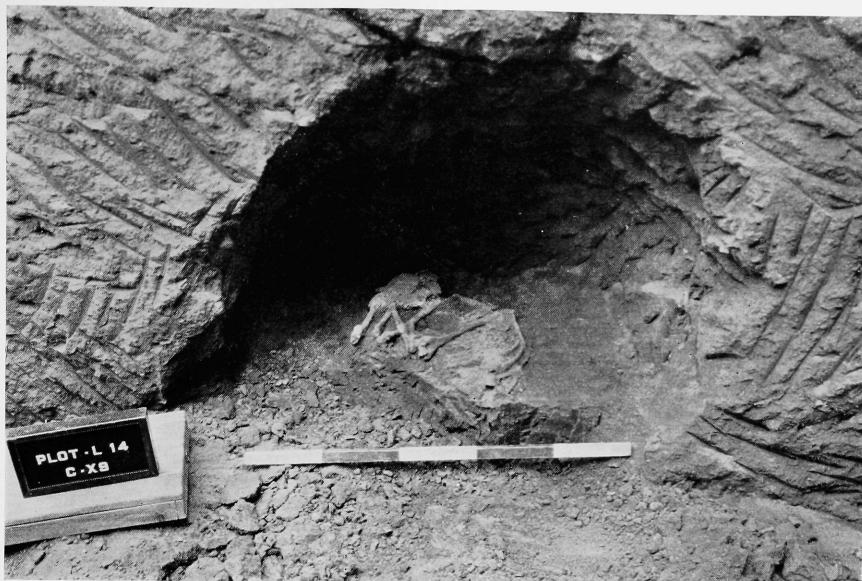


FIG. 49.—BURIAL c X9 OF LEVEL 13

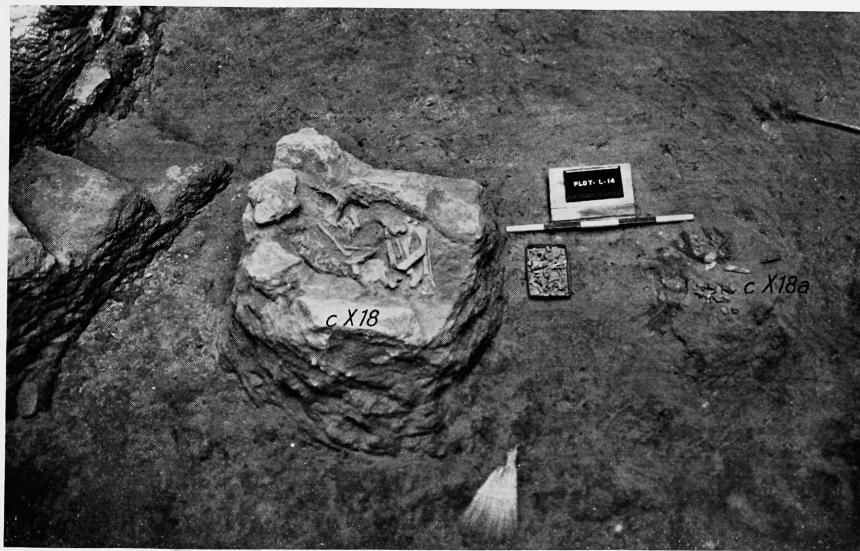


FIG. 50.—BURIALS c X18 AND c X18a OF LEVEL 13

e X15, Fig. 55); two were stone box burials (e X18, Fig. 50; e X14, Figs. 55-57 and 59); and one was a wooden box burial (e X10, Fig. 48). Besides these burials a fetus was found buried in a pot. The skeletons were all contracted, and two (e X12, Fig. 52, and e X18) had mortuary gifts. On e X13, e X14 (Figs. 58 and 60), and e X16 fragments of woven fabric were found, and with e X13 fragments of a reed mat (Figs. 53-54). The children were probably wrapped



FIG. 51.—BURIAL e X11 OF LEVEL 13

in blankets or mats. With e X14 vestiges of leather were found, and it is probable that the body was wrapped or dressed in an animal skin also.

This Level 13 gave us much information as to the daily life of the early settlers of the Alishar mound. They had approximately rectangular houses. Their domestic animals included goats, pigs, sheep, and cattle. Charred grain¹² proves that they were agriculturists as well. Patches of charred straw also were found. The loom weights and especially the fabric and mat fragments in the burials show that they knew how to spin flax and weave reeds. Small

¹² Cf. *OIP* XXX 333.

objects of stone and bone were rather primitive; whereas the pottery, as far as we could reconstruct it, showed an amazing variety and refinement of form. Copper was still too rare and too valuable to use for household objects. In addition to unidentifiable fragments of copper we found a pair of bracelets (e 2038, Fig. 52) with skeleton e X12, pins, points, and a stamp seal (see p. 93).

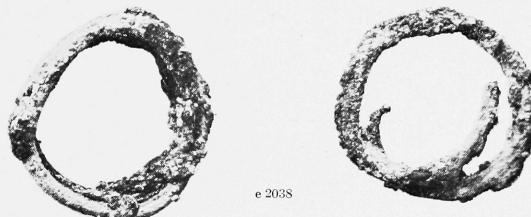


FIG. 52.—BURIAL e X12 OF LEVEL 13. THE MORTUARY GIFTS ARE SHOWN IN ACTUAL SIZE

Above Level 13 was a refuse layer about 3 meters thick, very much disturbed, in which only one main settlement level could be distinguished. This was Level 12, 19.60 below the mound top. Except for some irregular heaps of stones it showed no distinctive features whatever. This level, with the refuse layer above it, marks the upper limit of the Chalcolithic settlements on the Alişar mound.



FIG. 53.—BURIAL e X13 OF LEVEL 13

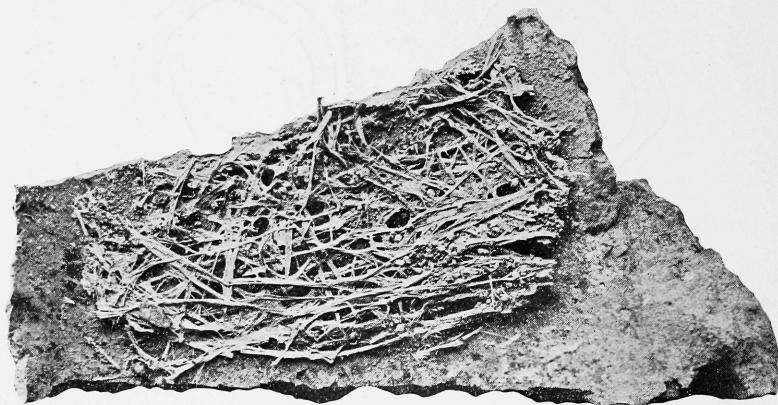


FIG. 54.—REMAINS OF REED MAT IN BURIAL e X13. ACTUAL SIZE



FIG. 55.—BURIALS e X14 (STONE BOX UNOPENED) AND e X15 OF LEVEL 13



FIG. 56.—THE EMPTY STONE BOX OF e X14, SHOWING (DIAGONALLY ACROSS CENTER) THE MUD BRICK WHICH LAY
BENEATH THE SKELETON



FIG. 58.—CONTENTS OF THE STONE BOX OF e X14

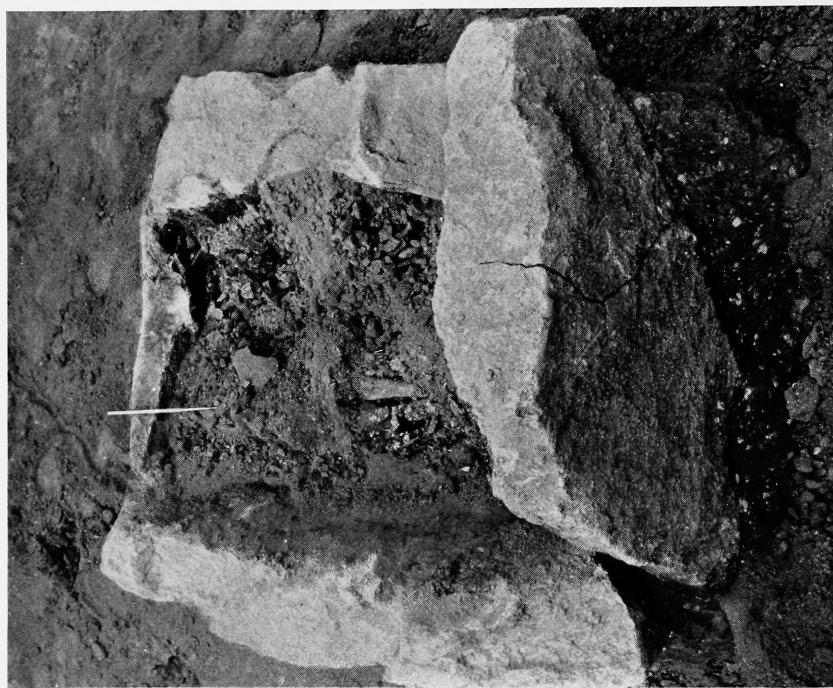


FIG. 57.—THE OPENED STONE BOX OF e X14

DISTRIBUTION BY LEVELS

ARCHITECTURAL DETAILS

LEVEL 19 (29.00 m.): None.

LEVEL 18 (27.80 m.): Stone pavement? (Fig. 34).

LEVEL 17 (27.00 m.): None.

LEVEL 16 (25.60 m.): Wooden roof support on stone base (Figs. 36-38).

LEVEL 15 (24.80 m.): Refuse pit.

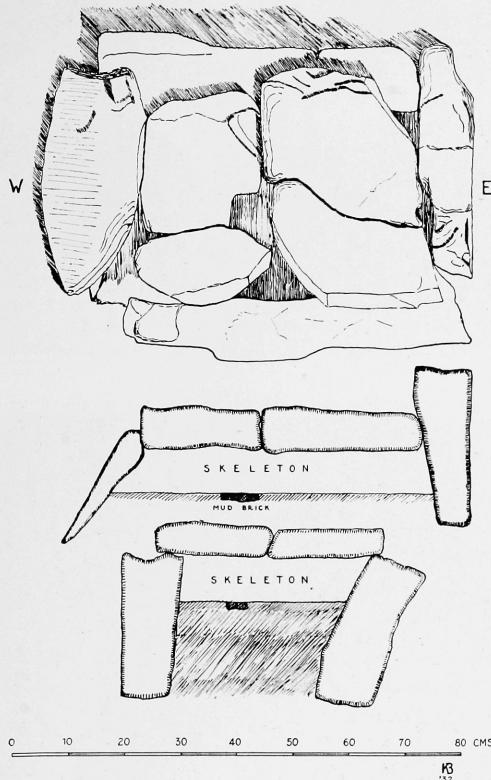


FIG. 59.—DRAWINGS OF STONE BOX BURIAL e X14. SCALE, 1:10

LEVEL 14 (23.50 m.): Part of a nearly rectangular room with walls of sun-dried bricks, a fireplace in one corner; also a pit lined with sun-dried bricks (Figs. 40-42).

LEVEL 13 (21.20 m.): Part of a house with mud walls meeting at approximately right angles, one partition wall of sun-dried bricks, and two patches of packed earth floor (Figs. 44-46).

LEVEL 12 (19.60 m.): None.

BURIALS

LEVEL 19 (29.00 m.): None.

LEVEL 18 (27.80 m.):

e X18 Earth burial? (Figs. 34-35). The skeleton of an adult female was incomplete and extremely friable. It lay on its left side with legs flexed; the arms were missing. The direction from sacrum to atlas was 35° east of north. Since no traces of burial were found, it is possible that this body was not regularly buried, especially as it was found on the same level as part of a pavement(?)



FIG. 60.—FABRIC REMAINS FOUND WITH e X14. A-B. FABRIC ON ANIMAL SKIN. SCALE, 2:1. C. FABRIC ATTACHED TO MANDIBLE. ACTUAL SIZE



FIG. 61.—BURIAL e X16 OF LEVEL 13

LEVEL 17 (27.00 m.): None.

LEVEL 16 (25.60 m.): None.

LEVEL 15 (24.80 m.): None.

LEVEL 14 (23.50 m.):

e X19 Pot burial (Fig. 43). The skeleton was found in a refuse layer a little higher than the foundations of the wall in the eastern part of the plot. It was in a state of such poor preservation that nothing could be saved, but a few fragmentary bones showed that it was the skeleton of an infant. The pot in which the infant was buried, probably in a contracted position, could not be repaired; it consisted of a coarse, plant-tempered ware with a black, highly polished slip. Nothing definite can be said as to the direction of the skeleton. The orifice of the pot seems to have lain toward the south. Copper bracelets (e 2236-37), one of them still around an ulna; two silver earrings (e 2238-39), one of them fragmentary; a flint blade (e 2240); and a fragment of a serpentine macehead (e 2241) were found as mortuary gifts.

LEVEL 13 (21.20 m.): The six skeletons e X11-16 were found 21.30-21.60 deep immediately below the floor level of a room of Level 13 (cf. Fig. 44). Whether the other four (e X9, 10, 18, and 18a) were outside or inside of another room could not be determined (Fig. 44); e X18 and e X18a were buried deeper than the others.

e X9 Earth burial (Fig. 49). The skeleton of a mature female(?) was found 20.90 deep and lay on its right side, flexed. The hands were under the skull. The direction from sacrum to atlas was 15° south of west.

e X10 Wooden box burial (Figs. 47-48). The skeleton of a young infant was found 21.30 deep. It lay on its right side, flexed, and the direction from sacrum to atlas was 10° north of west. The box consisted of logs, of which several had been split. The wood is studied in *OIP XXX* 331.

e X18 Stone box burial (Fig. 50). The skeleton of an adult woman was relatively well preserved. It was found 21.80 deep. Some of the bones were impregnated with mineral deposits. The direction from sacrum to atlas was 12° north of west. The skeleton lay on its left side, flexed, with the hands between the knees and the skull bowed forward to about a 90° angle from its normal position. In the cavity formed by the flexed position between the skull, knees, and ribs there was a pot (c 1735, Fig. 70) and among the ribs a sherd with an incised design.

e X18a Pot burial? (Fig. 50). The skeleton of an infant was found 1.50 east of e X18 and .70 below it, associated with animal bones and a large cup-base (c 1734, Fig. 84 20). This fragment was probably part of the vessel in which the child had been buried. Unfortunately the remains of this child were so fragile that it was impossible to prepare them for even photographing or sketching, but the skeleton seems to have lain on its right side, flexed.

e X11 Earth burial (Fig. 51). This and the five remaining skeletons were found immediately below the floor level of the large room in the western part of the plot. This skeleton, that of a child approximately five years old, was on its right side, flexed. The direction from sacrum to atlas was 14° south of west.

e X12 Pot burial (Fig. 52). The skeleton of an infant about twenty months old was in very poor condition. It lay on its right side, flexed. The direction from sacrum to atlas was 11° south of west. Two small copper bracelets (e 2038) were mortuary gifts. The burial pot (e 2110, Fig. 78) could be restored.

e X13 Pot burial (Fig. 53). The skeleton, probably that of an infant, was completely destroyed. Nevertheless this burial was of peculiar interest, as part of a reed mat in which the body had been wrapped was preserved (Fig. 54). Traces of fabric were found, but could not be saved. The orifice of the pot lay to the west-southwest.

e X14 Stone box burial (Figs. 55-59). The very poorly preserved skeleton of a child about two years old, in a rather well built stone box, lay on its right side, flexed. The direction, judging from the orientation of the stone box, was 25° south of west. Remains of some animal skin and of woven fabric in which the child had been wrapped or dressed were found (Figs. 58 and 60). The fabric is described in *OIP XXX* 334 f. Beneath the skeleton was a mud brick. The practice of laying a brick beneath the skeleton was frequent in the Copper Age (cf. p. 136).

e X15 Pot burial (Fig. 55). The skeleton of a child about five years old was very incomplete; it lay on its right side, flexed. The direction from sacrum to atlas was 20° south of west. The head was covered with the cup of a "fruit stand" vessel (e 1879, Fig. 75). The burial pot (e 2296, Fig. 79) could be restored.

e X16 Earth burial (Fig. 61). The skeleton of a child was incomplete and badly disintegrated. It lay on its left side, flexed. The direction from sacrum to atlas was 10° north of west. Sherds of a pot with the remains of a fetus were found 1.30 west of e X16.

LEVEL 12 (19.60 m.): None.

For the craniological material see *OIP XXX*.

POTTERY

Since we excavated Chalcolithic deposits in only one very limited area, it must be emphasized that only tentative statements as to the general character of this period can be made. All the known Chalcolithic pottery of Alişar is handmade. Besides wet-smoothed ware three principal groups of slipped pottery may be distinguished: grayish buff, black, and red ware, each with minor variations. The thick slip is generally carefully burnished. The ware is grit-tempered and usually coarse, though very thin ware also was found. The firing temperature varied from low to fairly high. Decoration appears relatively seldom. Only a few painted sherds were found, whereas punctated-incised pieces are more frequent. Some of the incised ware had white or ocher inlay. Decorations produced by finger impressions or by attaching small hemispheric lumps of clay are rare. There appears a relatively great variety of forms, from roughly shaped bowls to elegantly shaped "fruit stands" (Fig. 62). Cup-bases, carinated rims, and band handles are typical.

The predominant Chalcolithic wares were black- and grayish buff-slipped, whereas red-slipped ware, appearing sporadically in the older layers, became predominant in the Copper Age. The black- and grayish buff-slipped ware disappeared with the end of the Chalcolithic period. The whole series of pottery seems to be a homogeneous local development without foreign influence, with two possible exceptions. The few painted sherds may, in view of their scarcity, be imported pieces. The exceedingly fine black ware which appears from Level 14, 23.50 deep, until the end of the Chalcolithic age might also be attributed to a foreign influence. It may be an actual importation from a neighboring pottery center, which would not need to be very far away, as a modern parallel may illustrate. The Anatolian peasants and the inhabitants of the smaller cities still secure their pots and vessels for daily use from local potters, whereas the potters of Avanos, who use an especially fine clay found in the environs of their city, supply the finer ware for the whole of central Anatolia.

The different colors of slips are entirely due to the method of firing, and the first appearance of any of the three main colors may have been accidental. The many variants and combinations of the colors as well as their appearance on various parts of a vessel show this clearly. Gradually the potter attained the skill to obtain just the color effect wanted by the degree of heat employed and the mode of firing. The Chalcolithic pottery of Alişar, as we have it now, does not seem to represent its most primitive type. The relatively advanced technique and form suggest that this culture began elsewhere and continued its development here.

PLAIN WARE

The majority of the vessels and sherds were covered with a slip and burnished. This was necessary primarily for a practical reason—to keep liquids from filtering through the wall of the only moderately fired vessel. The use of the slip as a means of decoration was only secondary. All wet-smoothed pieces show that the clay used contained mica.

In the oldest levels (15-19) a handmade ware with a grayish buff slip (Pl. I 3 [=Fig. 76 2]), more or less carefully polished, seems to be predominant. However, the area freed was too small to justify generalizations. The ware is grit-tempered, mostly coarse, and moderately fired. The outsides of the vessels are polished or burnished; on the insides the slip is sometimes black and highly burnished. Black-topped sherds (Pl. I 5 and Fig. 68 5-6) and pieces with black smoke stains (Pl. I 4) appear. Relatively few pieces were found which showed a yellowish red zone on the inside near the rim or reddish stains on the outside, due to oxidation. When such stains appear together with black smoke stains, a very fine mottled effect is produced

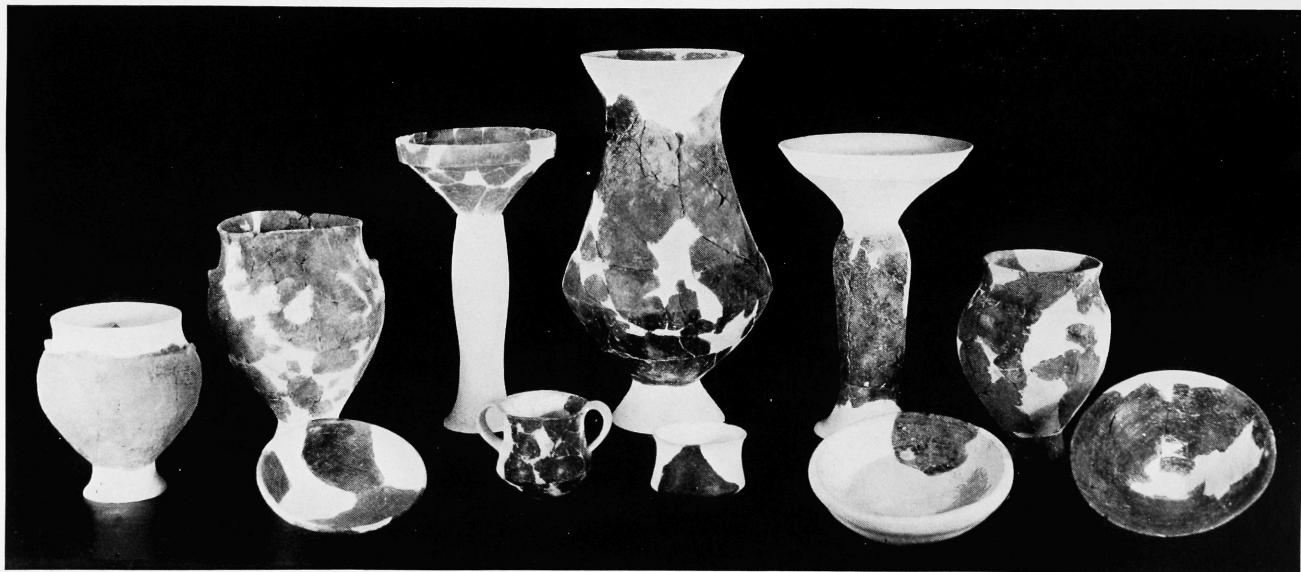


FIG. 62.—REBUILT VESSELS OF THE CHALCOLITHIC AGE IN THE ORIENTAL INSTITUTE MUSEUM, CHICAGO

(Pl. I 5). Higher up, between Levels 12 and 14, appear other variants of buff ranging from the grayish buff of the older period to brown (Pl. I 2-4).

Handmade black ware with a thick, polished, sometimes highly burnished, slip must be considered the typical ware of the Chalcolithic age (Pl. I 6-7). It appears sporadically at the beginning, increases later on, and toward the end of the period replaces completely the grayish buff pottery. In paste and firing it is similar to the previous ware. A very careful type of burnishing¹³ appears for the first time. The strokes of the burnishing tool are made carefully parallel and close to one another, running either diagonally or vertically to the rim. The interiors of bowls are often burnished so that all the strokes converge in the center. The black color on the outsides of the vessels varies, sometimes appearing as a grayish black, and on the insides of the rims we find reddish zones due to the firing.

An extremely fine, well fired, and highly polished black ware (see Fig. 67) was found from Level 14 upward; as already stated, it may be of foreign make. The inside is usually grayish buff. Occasionally either black or yellowish red zones (likewise polished) appear inside the rim. Although handmade, this ware is hardly surpassed in quality by any other of the wares from the Alişar mound.

Handmade red ware appears sporadically from the very oldest layers, showing there a dark red color (Pl. II 4); a little later it appears with a brick red color (Pl. II 1). This changes gradually until, within the last settlement layers of the Chalcolithic period, the rich red typical through the following Copper Age is attained (cf. p. 152). Variants are brownish black or reddish brown. Smoke stains on the outside give interesting mottled effects. The interiors are often black, and black-topped rim pieces are frequent (e.g., Fig. 68 4). The paste and finish are similar to those of the coarser wares, but the firing is higher. Sometimes the ware is very fine, but never of the same quality as the fine black ware.

Other sherds appear: coarse or fine, polished or burnished, of various shades of light brown, often with smoke stains (cf. Pl. I 4). None of the variants is sufficiently numerous or characteristic to form a special group. In most cases they seem to have been "accidents" or at least rare pieces.

Besides the slipped ware, we found pieces of grayish or buff handmade ware which was simply wet-smoothed (e.g., Pl. I 1 and Fig. 68 7). With very few exceptions this ware was coarse but a little better fired than the slipped wares. A few sherds of a wet-smoothed fine ware were found. All of the wet-smoothed ware showed traces of mica in the clay.

DECORATED WARE

Most of the decorated sherds, painted or incised, are so small that it cannot be decided definitely whether decoration all over the vessel or that in the form of bands was preferred. The greater part of the incised sherds belong to "fruit stands."

Only a very few pieces of painted ware were found, and it is quite possible that all of these were importations. In Level 17, at a depth of 27.20, we found a medium, grit-tempered sherd, .015 thick, with a grayish buff slip (Pl. II 5 [=Fig. 63 2]). On it was painted in darker gray a rather refined ornament consisting of a band of lozenges between parallel lines. The lozenges and angles are successively filled with smaller lozenges and angles, forming a so-called "false meander." The discovery of this sherd at such a depth was a great surprise to us, but careful investigation of every possibility of its being a "stray" or having fallen down from a much higher level leaves no doubt that this piece rightly belongs here. The sherd is much discolored.

¹³ This technique has also been called "rippled"; see Frankfort, *Studies in Early Pottery of the Near East II* (London, 1927) 54.



1 (= Pl. II 2)



2 (= Pl. II 5)



3



4

FIG. 63.—PAINTED SHERDS. ACTUAL SIZE



FIG. 64.—PAINTED SHERDS. ACTUAL SIZE

In Level 14, at a depth of 23.40, were a few sherds of medium, grayish black ware which probably belonged to bowls. The highly burnished, black inner surfaces show lozenge ornaments in grayish lines (Pl. I 6 and Fig. 63 3-4). These lines seem to me to be traces of paint which has blistered and come off; it may be that a carboniferous paint was used which lost its color through accidental heating. The original color naturally could not be determined.

Several sherds with brownish red linear ornamentation on a thick creamy white slip were found in Level 13, 21.20 deep (e.g., Pl. II 2 [= Fig. 63 1] and Fig. 64 4-5). They were of coarse or fine ware, and the designs seem to have been applied rather carelessly. A little higher, but still within the refuse layers of the same level, were found sherds of a decidedly finer and better ware with a light buff slip. They had brownish red linear ornamentation on both surfaces (e.g., Fig. 64 1-2). Some of them were rim pieces of small cups or bowls.

Finally, one sherd with a brownish red "spiral" motive on a buff slip was found in the refuse layers of Level 12, 19 meters deep (Pl. II 3 [= Fig. 64 3]).

A great many sherds, mostly of coarse or medium ware, have punctated-incised ornamentation (Pls. I 1 and 4 [= Fig. 65 16] and II 1 [= Fig. 65 1] and Figs. 65, 76 4, and 83 1); they were found in varying frequency from the upper refuse layers of Level 12 (18 meters deep) down to Level 17 (27 meters deep). Some of them show remains of white or ocher inlay. In addition to the incised lines, sometimes part of the design was cut out (e.g., Pls. I 4 [= Fig. 65 16] and II 1 [= Fig. 65 1] and Fig. 65 3, 11, 15, 18, 20, 22, 28-29, 31). The surfaces were wet-smoothed, polished, or burnished. The surface color was brick red, yellowish brown, gray, or black, with several intermediate colorings as well as mottled effects. The potters seem to have preferred an ornamentation oblique to the rim or base, such as lozenges, chevrons, or crosshatching (Fig. 66). However, ornamentation with a vertical tendency appears also. Most of the pieces found were fragments of pedestals of "fruit stands," too small to justify any definite statement as to whether the design was predominantly in bands or over the entire vessel.

Very finely incised designs were found on fine ware. Fine grooves forming a band around the base of the neck appear frequently (Fig. 67 1-2). Zigzag lines sometimes extend downward from such bands (Fig. 67 5-6). Other ornaments are seen in Figure 67 3-4, 7-9. A number of fine-ware fragments belonged to flat-bottomed vessels horizontally grooved all over (e.g., Fig. 67 13). A different type of incision is shown on gray, wet-smoothed sherds of medium ware (Fig. 68 8, 16). The chevrons of No. 12 in Figure 68, a coarse sherd with a reddish buff slip, seem to have been incised with a rather large blunt instrument. Neatly incised circles forming a kind of rosette appear on a sherd with a highly polished dark brown slip (Fig. 68 15).

One sherd (Fig. 68 10) with a dark brown slip shows fragments of an ornamentation which had been pressed into it with a large blunt instrument. A similar instrument seems to have been used for No. 11 in Figure 68. Finger impressions as ornaments appear occasionally (Figs. 83 10 and 84 1). Two wet-smoothed sherds have small hemispheric lumps of clay added as ornaments (e.g., Fig. 68 14). Very rough ornamentation appears on the coarse, wet-smoothed sherds shown in Figure 68 7, 9, 13.

A rim piece of a black fine-ware bowl, No. e 1530, is fluted on the interior and has an incised zigzag band on the lip (Fig. 67 10). Figure 67 12 shows a fragment of a vessel the exterior of which was fluted from the base of the neck downward. Several fragments were found of a blackish brown-slipped, highly polished ware with large, horizontal corrugations (e.g., e 1531, Fig. 67 11). Two fragmentary "fruit stands" show horizontal fluting (e 1509, Fig. 76 6, and e 1617, Fig. 75), and one shows diagonal fluting (e 1618, Fig. 76 3).



FIG. 65.—PUNCTATED-INCISED SHERDS. SCALE, 1:2

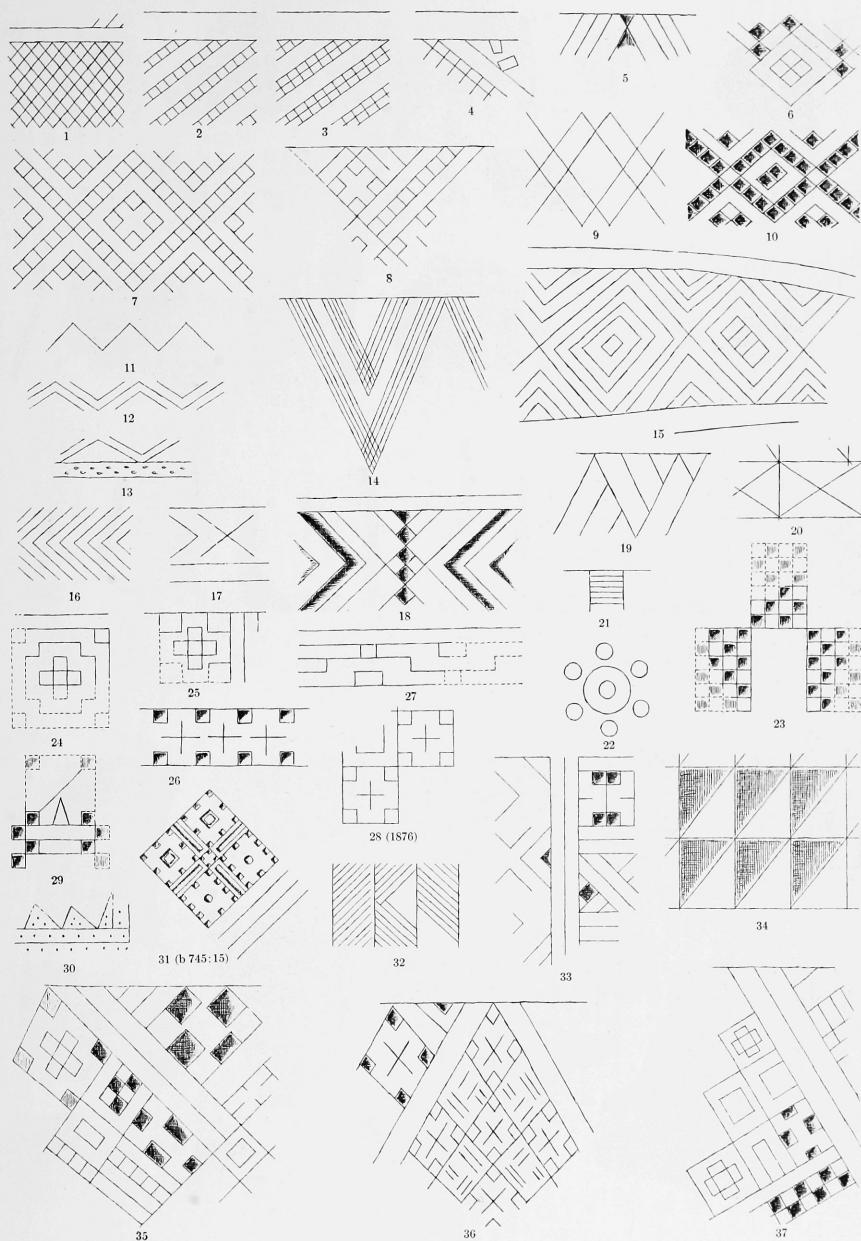


FIG. 66.—ORNAMENTAL MOTIVES OF CHALCOLITHIC POTTERY

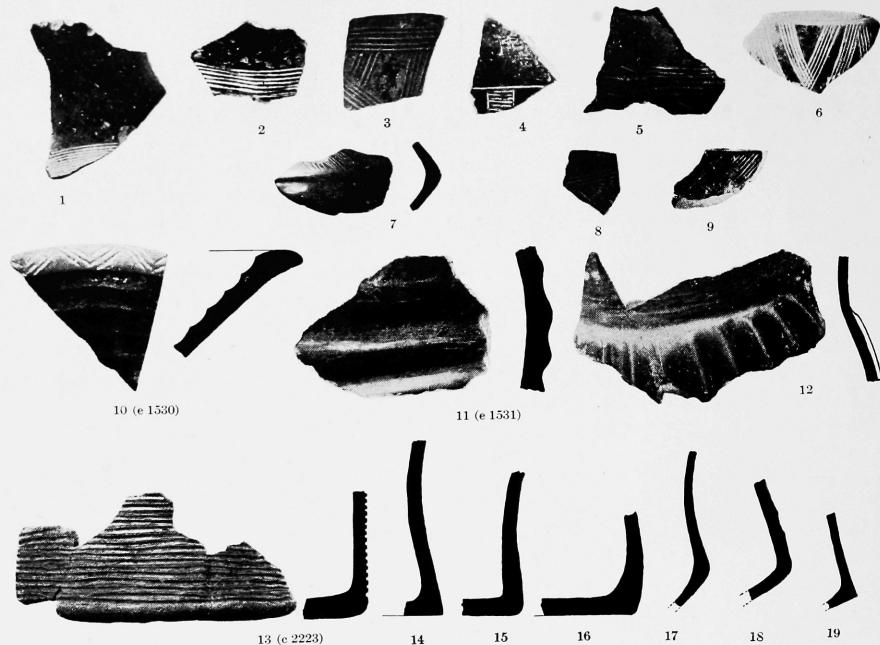


FIG. 67.—SHERDS AND PROFILES OF FINE BLACK WARE. SCALE, 1:2

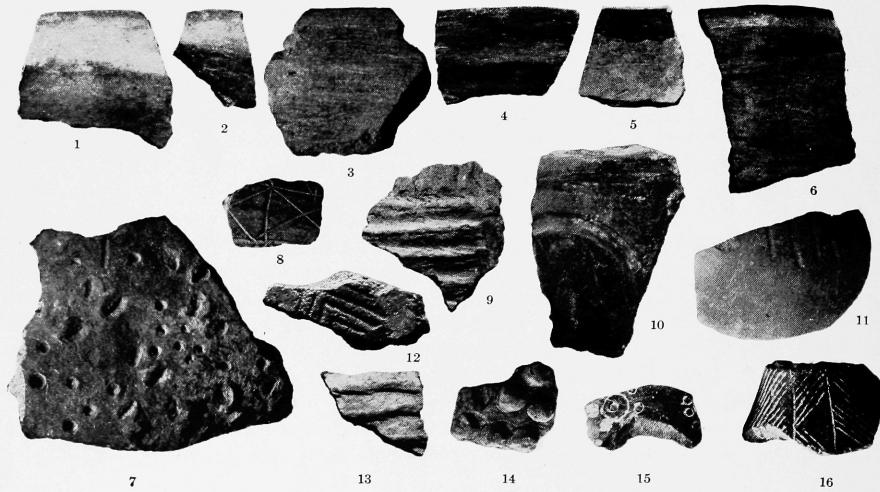


FIG. 68.—SHERDS. SCALE, 1:2

FORMS¹⁴

Jars with orifices nearly as large as the body diameter and with necks only slightly contracted are characteristic of the Chalcolithic age. A common form of cup is bell-shaped; the bottom may be rounded and sharply divided from the body, or it may be flat. "Fruit stand" vessels form a third group characteristic of this period.

Only one complete bowl was found (e 2107, Fig. 69); it has a rounded bottom and a straight rim. However, similar rim and bottom pieces found in the various layers show that these bowls were numerous. Nos. c 2749-50 (Fig. 69 and Pl. VII) and Nos. c 2748 and c 2751 (Pl. VII) are four bowls reconstructed from such pieces. Simple rims seem predominant, although carinated rims also were used. Figure 81 69-80 shows various other forms of bowl rims. Nos. 66 and 72 in Figure 81 show the rim shapes of the incised sherds Nos. 1 and 3 in Figure 65. Figure 67 10 shows the decoration and rim shape of a very fine bowl, No. e 1530. Knobs sometimes appear at the edge of the rim (e.g., Fig. 83 3). Such knobs later become typical features of the red-slipped Copper Age bowls. A vertically perforated knob is shown in Figure 83 5 and a horizontally perforated one in Figure 83 4.

Cup e 2108 (Fig. 69) is of the same general shape as the bowls with simple rims, except that on one side (or both?) a looped band handle grows out of the rim. The fine-ware cups (Fig. 70) have very elegant forms. The bottoms of some are rounded up to the greatest body diameter, well below the middle of the vessel. Above this the wall rises in an even concave sweep to the belled rim (e.g., c 2747). No. c 1735 has the same shape but is of coarser ware. No. c 577 is of another type, which we may call a "goblet"; here the rim is slightly offset, and four(?) knobs curved slightly upward appear directly below the rim. The vessel has a shallow cup-base. No. e 1619 (Fig. 73), described below, may be a large cup or beaker.

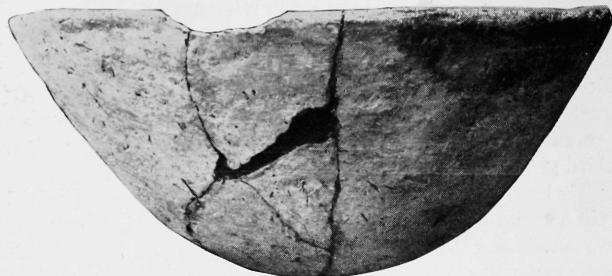
Three fragmentary two-handled cups of fine ware (Fig. 70) have in general the same features as the two types of cups already described. No. c 2746 had a large flat bottom and handles with triangular cross-section probably extending from bottom to rim. Nos. e 1877 and e 2100 had rounded bottoms and band handles which extended from median body to rim. Both vessels were reinforced at their greatest diameters by broad convex belts. The bottom of No. e 2100 had a small concavity, and that of No. e 1877 was slightly flattened.

The existence of pitchers is suggested by numerous sherds of rims, handles, and bottoms in various wares and colors. They appeared in all levels. The handles seem to have been attached preferably to the rim; most of them were not very large (Fig. 83 6-15). In most cases they are flat, sometimes slightly concave in the middle. One complete pitcher or one-handled jar (e 1709, Fig. 73) is of a different shape. It has a globular body and a sharply offset neck widening to the orifice. The handle extends from shoulder to median body.

The jars in Figures 71-72 are characteristic of the Chalcolithic period. The wide orifice and slightly curved neck are to be noted. The rim has a simple edge. Below the base of the neck, which is sometimes slightly offset, there may appear four knobs curved slightly upward. On No. e 1708 (Fig. 72) these knobs are large and slightly depressed in the centers. The bases of the jars are flat, slightly concave in the middle, or cup-shaped. These vessels appear in black and grayish buff finish, more or less well polished. Related to them may be Nos. e 1619, e 1876, and e 1878 (Fig. 73). No. e 1878 has one handle extending from lip to body like jars of the Copper Age. The body of No. e 1876 tapers toward the base; the neck is completely lost. The large cup(?) e 1619, although more pear-shaped, shows similarity to this type.

Two large vessels (e 1870-71, Fig. 74) have a beautiful shape. The neck curves inward from a wide orifice. The lines of the body then curve outward gradually to the largest diameter,

¹⁴ Shown in Pl. VII.



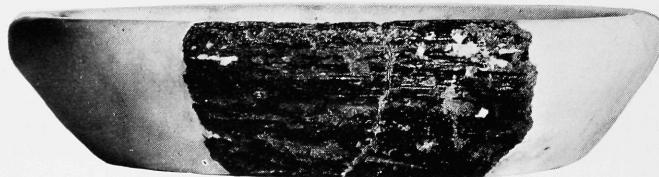
e 2107



e 2108



e 2750



e 2749

FIG. 69.—BOWLS AND A CUP. SCALE, 1:2



e 1877

e 2100



c 2746



c 2747



c 577



c 1735

FIG. 70.—CUPS AND A GOBLET. SCALE, 1:2



e 1872



e 2102

FIG. 71.—WIDE-MOUTHED JARS. SCALE, 1:3

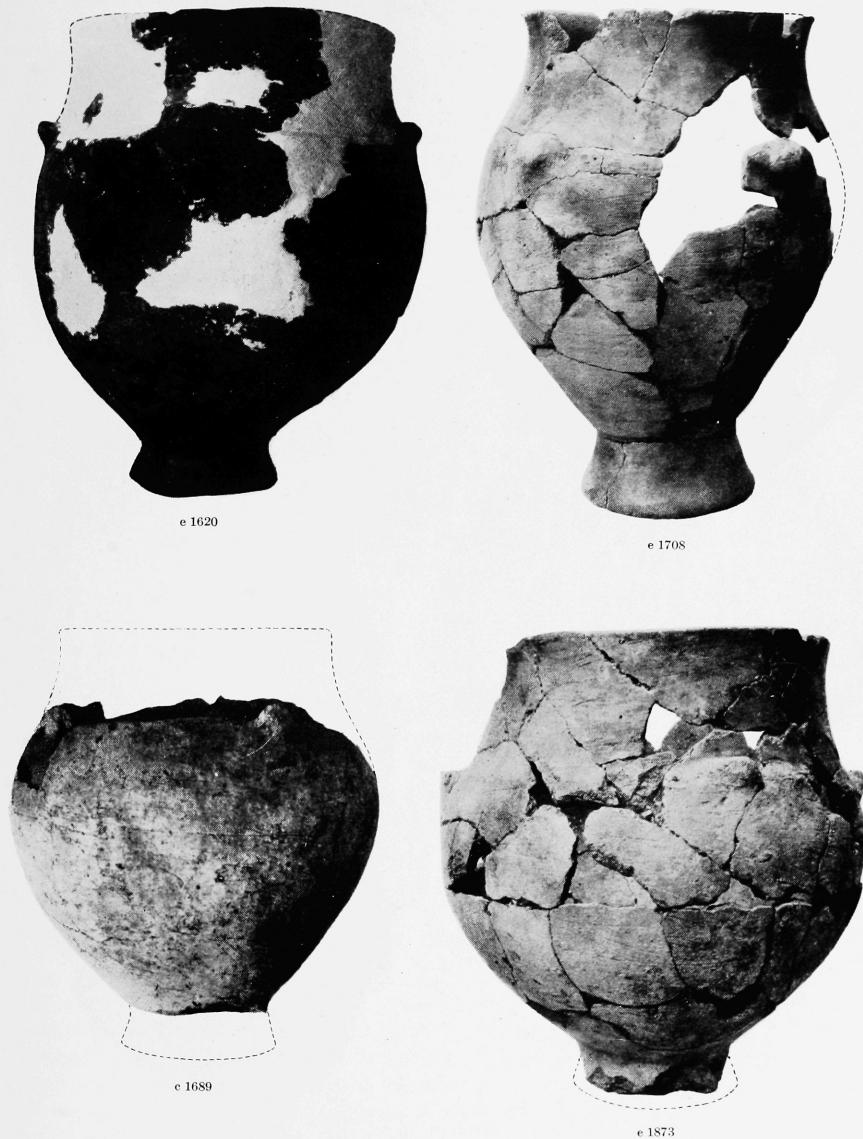


FIG. 72.—WIDE-MOUTHED JARS WITH CUP-BASES. SCALE, 1:3



e 1619



e 1876



e 1878



e 1709

FIG. 73.—JARS, A CUP, AND A PITCHER. SCALE, 1:3

which is only slightly greater than that of the orifice. The greatest body diameters are accentuated by broad convex belts which were not entirely ornamental but served as reinforcements; the vessels are apparently made in two pieces, one from bottom to maximum diameter and one from maximum diameter to rim. Enough remains of the lower parts of the vessels to show that they had cup-bases.



FIG. 74.—VESSELS. SCALE, 1:4

The so-called "fruit stands" have by far the most elegant shapes. They appear during the entire Chalcolithic age. Although we did not find a complete specimen, we found so many fragments of such vessels that a general reconstruction of the shape is possible. Most of the fragments found belonged to pedestals only, but enough pieces from the joint between cup and pedestal were preserved to permit reconstruction. Two definite types can be differentiated: an older one in which the pedestal curves in sharply just below the cup (e.g., c 2019, Fig. 75) and a later one in which the pedestal is more slender and the transition to the cup is less pronounced (e.g., e 1616, Fig. 75). In spite of much overlapping, a general line of division may be drawn between the "fruit stands" of Levels 13 and 14. The cups of both types were probably the same. Fragmentary "fruit stand" cups which could be mended were found only

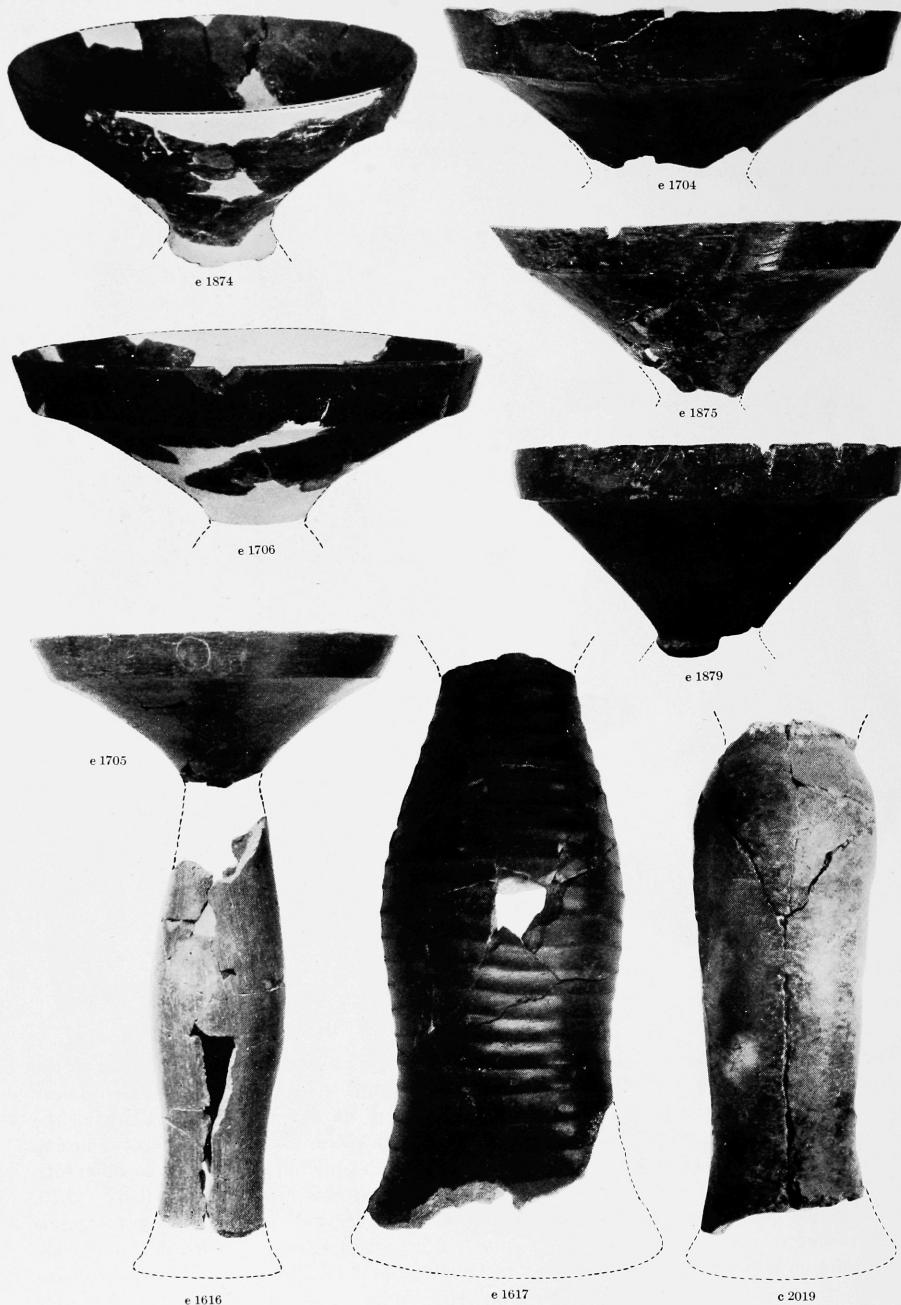


FIG. 75.—FRAGMENTS OF "FRUIT STANDS." SCALE, 1:3

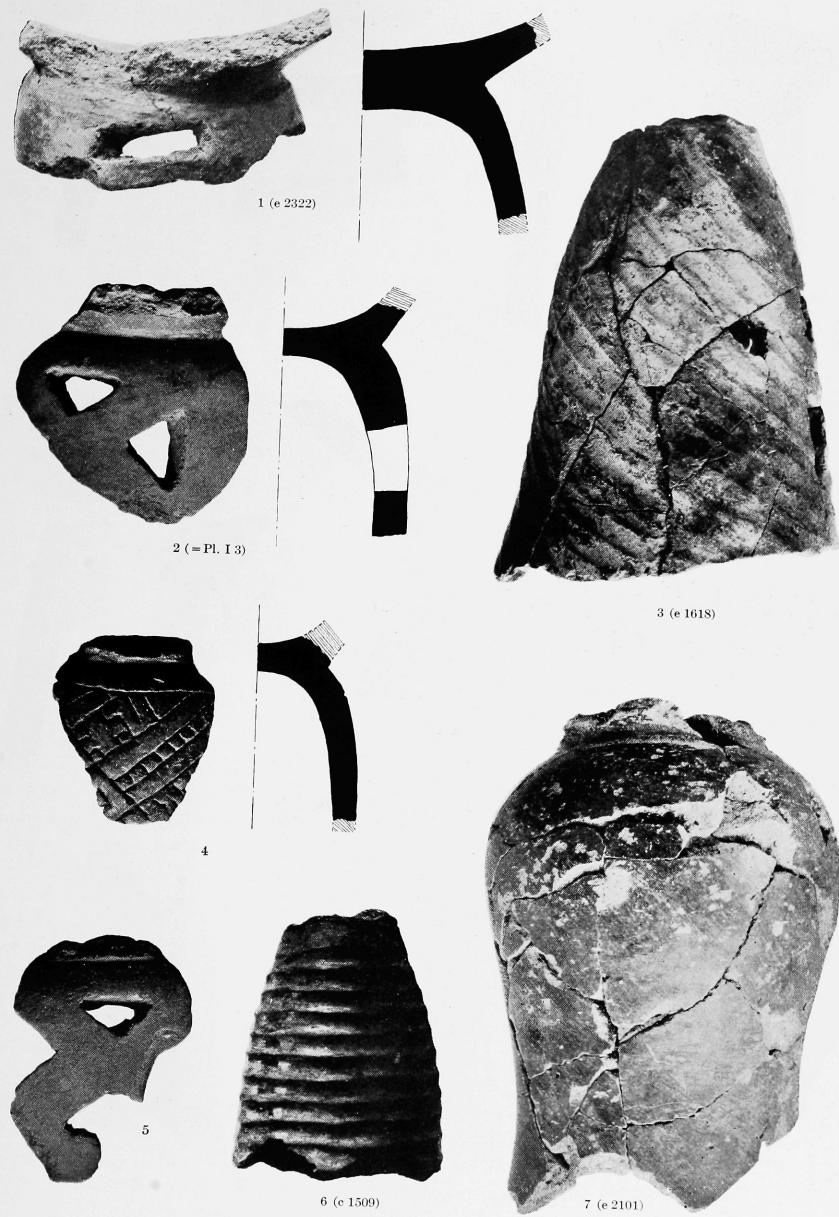


FIG. 76.—FRAGMENTS OF "FRUIT STANDS." SCALE, 1:2



FIG. 77.—FRAGMENTS OF "FRUIT STANDS" AND A LID. SCALE, 1:2

in Levels 13–14, but carinated rim pieces typical of these vessels (such as those in Fig. 81 29–68) were found in all Chalcolithic levels. The cups had black, dark red, reddish brown, or grayish buff slips.

Typical representatives of the presumably older type of pedestal are the grayish black fragment c 2019 (Fig. 75) and No. e 2101 (Fig. 76 7) with a brick red slip. Fragments of such pedestals with cut-out designs (Nos. 1 [e 2322], 2 [= Pl. I 3], and 5 in Fig. 76) are very interesting. No. e 1509 (Fig. 76 6), with a grayish black slip, and No. e 1617 (Fig. 75), with a black slip, are horizontally fluted. No. e 1618 (Fig. 76 3) is diagonally fluted and has a brownish buff, highly polished slip with smoke stains.

Examples of the later type of pedestal are illustrated in Figure 77. Typical is a gradual widening toward the middle, then a tapering inward before the final widening of the base (e.g., No. e 1616, Fig. 75). These stands appear with many shades of slip, from grayish buff to light yellowish buff, or only wet-smoothed. They are incised or burnished or both (Figs. 65 5, 23–26, 28–31 and 76 4).

Although numerous fragments were found, only three large storage vessels could be mended and restored (Figs. 78–79). Two of them, Nos. e 2110 and e 2296, had been used as burial pots. The ware is coarse; the slips, now much corroded and blistered, were black or grayish black. At the inside near the rim zones of reddish coloring, due to oxidation while being fired, sometimes appeared. The three vessels belong to three distinct types. No. e 2110 has an ovoid body with a slightly offset, belled neck. No. e 2298 has an ovoid body with a short straight neck. No. e 2296 has a sharply accentuated shoulder; the neck is short and straight. Probably the bottoms of all three vessels were flat. Several large sherds seem to have been parts of a large storage vessel with a relatively small looped handle growing out of the rim (e 2297, Fig. 80).

DETAILS

Rim forms are shown in Figures 81–82. Simple rims are most common, but carinated rims in many variations appear almost as often. Rims rolled outward or inward appear also, but less frequently. A few fine-ware bowl rims are well profiled. Rims of fine-ware jars or cups are curved slightly outward, and the necks of these vessels are sometimes accentuated by incised lines. The great majority of the larger vessels have rims with edges curved slightly outward.

Band handles, sometimes slightly concave in the center, are predominant (Fig. 83). A few handles are triangular in cross-section. The handles appear to grow out of the slightly flaring rims and loop down to the shoulders of the vessels. An unperforated handle is shown in Figure 83 9. Cup or bowl fragments with knobs are found less frequently (Fig. 83 3–5); sometimes the knobs are perforated. On the wide-mouthed jars appear knobs of various shapes, usually attached just below the necks and projecting slightly upward (Fig. 84 2–7). Special features are handle-spouts, of which several fragments were found (e.g., Fig. 83 1–2).

Bottom pieces are shown in Figures 67 13–19 and 84 9–25. Cup-bases with straight or curved profiles predominate. Slightly concave bottoms are frequent in large vessels. Most fine-ware vessels have large flat bottoms, although rounded bottoms with small concavities appear.

Only a few spouts were found. Besides handle-spouts, already mentioned, a few fragmentary tubular spouts were unearthed. A few lids appeared (e.g., Fig. 77 5), more or less round disks with small flat protuberances which were perforated with small holes. Fragments of strainers were found in most levels, even the oldest ones. Most of them seemed to be from the side of the vessel, near the rim.



e 2110



e 2298

FIG. 78.—STORAGE JARS. SCALE, 1:5



e 2296

FIG. 79.—STORAGE JAR. SCALE, 1:5



e 2297

FIG. 80.—FRAGMENT OF A
STORAGE JAR SHOWING
HANDLE. SCALE, 1:5

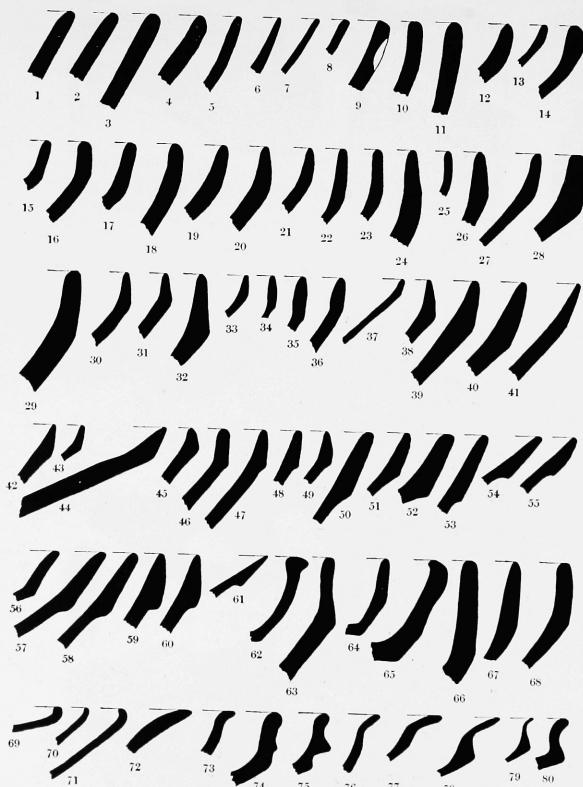


FIG. 81.—PROFILES OF RIM PIECES. SCALE, 1:3

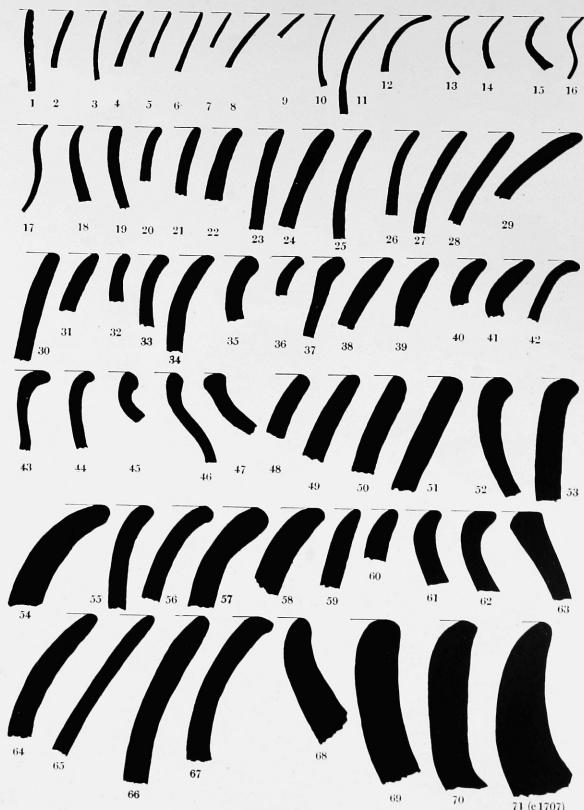


FIG. 82.—PROFILES OF RIM PIECES. SCALE, 1:3

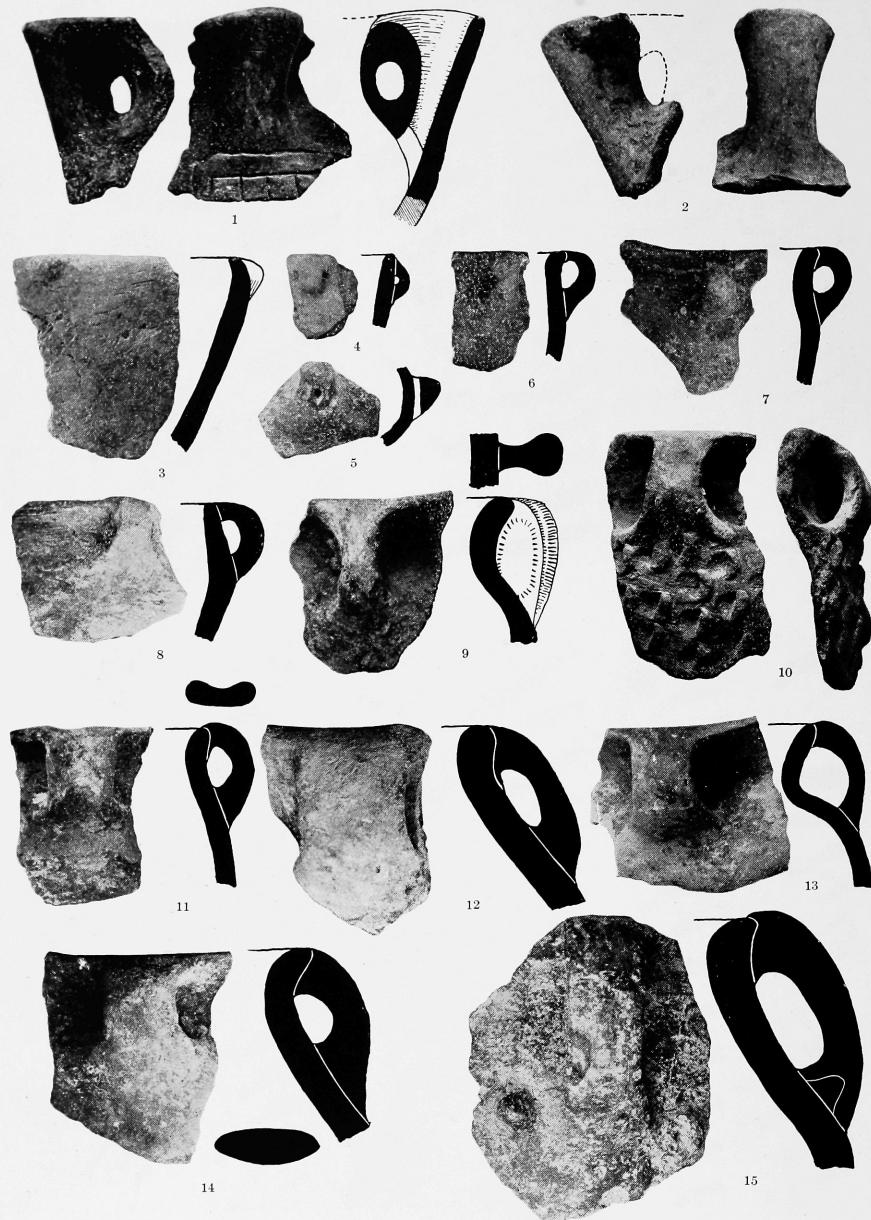


FIG. 83.—HANDLES. SCALE, 1:2

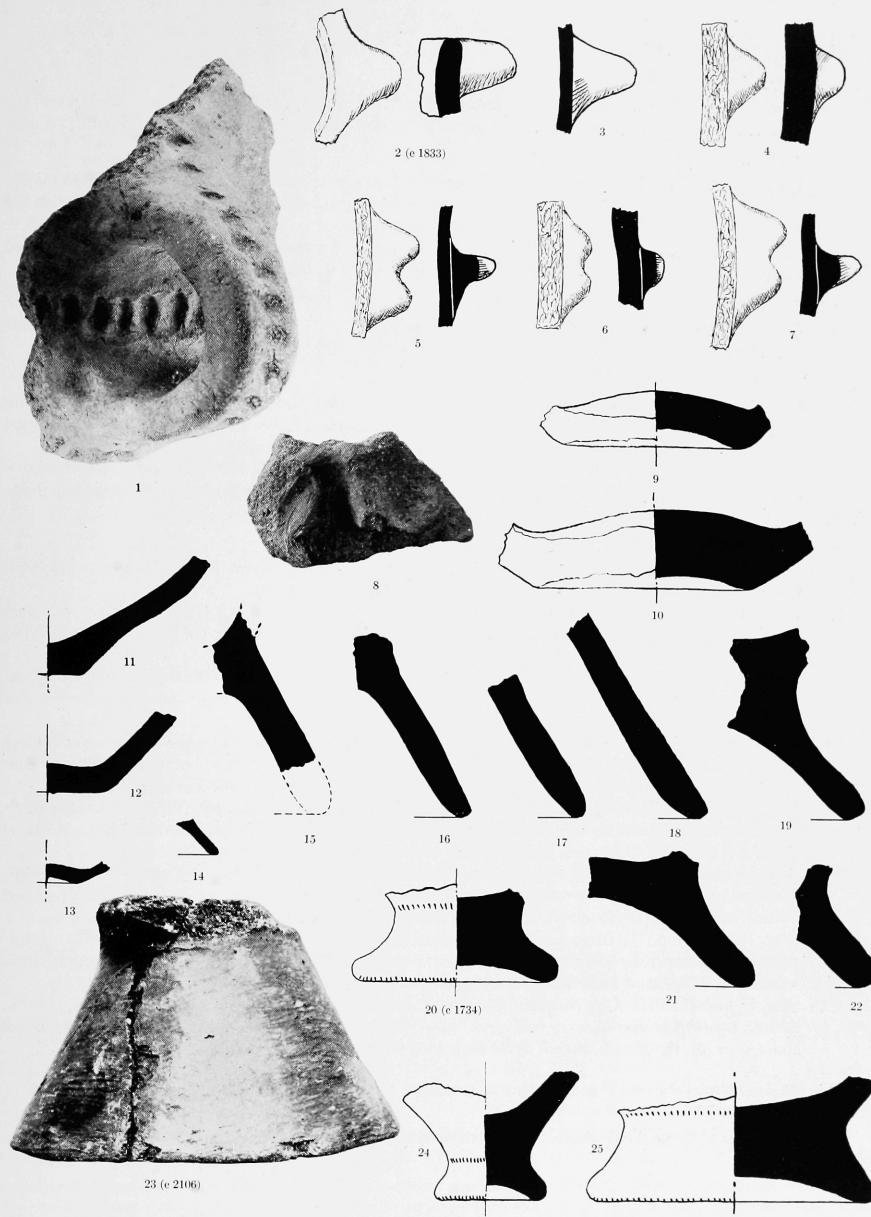


FIG. 84.—HANDLES AND BOTTOM PIECES. SCALE, 1:2. CUP-BASE e 2106. SCALE, 1:3

DISTRIBUTION BY LEVELS¹⁵LEVEL 19 (29.00-27.80 m.):¹⁶ None.

LEVEL 18 (27.80-27.00 m.):

e 2107 (Fig. 69 and Pl. VII). Bowl .095 high, .219 in diameter;¹⁷ medium, grit-tempered, well made ware; buff paste; moderately fired; grayish buff slip on outside; black slip on inside; burnished. Found 27.35 deep.

LEVEL 17 (27.00-25.60 m.):

e 2132 (Fig. 65 13). Top or bottom fragment of a small rectangular vessel, with an attachment in the middle, .016* h., .063* wide; medium, grit-tempered, well made ware; buff paste; moderately fired; grayish buff slip and incised ornament on outside; burnished on outside.

e 2109 (cf. e 1876, Fig. 73). Fragment of a medium-sized vessel, base and neck broken off; coarse, grit-tempered, fairly well made ware; moderately fired; black slip on outside; burnished. Found 26.30 deep.

LEVEL 16 (25.60-24.80 m.):

e 2106 (Fig. 84 23). Fragmentary cup-base of a large vessel, .084* h., .140 d.; coarse, grit-tempered, well made ware; moderately fired; grayish black slip; highly burnished. Found 25.50 deep.

LEVEL 15 (24.80-23.50 m.):

e 2223 (Fig. 67 13). Fragmentary flat base of a cup which probably had a belled orifice, .045* h.; medium fine, grit-tempered, well made ware; moderately fired; grayish brown slip on outside with small grooves around the vessel parallel to base; burnished.

e 2019 (Fig. 75 and Pl. VII). Pedestal fragment of a "fruit stand," .280* h., .100 d., showing attachment of cup; coarse, grit-tempered, fairly well made ware; buff paste; moderately fired; grayish black on outside; polished.

LEVEL 14 (23.50-21.20 m.):

e 2322 (Fig. 76 1). Neck fragment of a "fruit stand," .060* h.; coarse, grit-tempered, well made ware; moderately fired; grayish buff slip and cut-out design; polished. Found 22.80 deep.

e 1734 (Fig. 84 20). Cup-base of a large vessel; slightly curved profile; coarse, grit-tempered, fairly well made ware; moderately fired; black slip on outside; highly polished. Probably base of burial vessel of e X18a, found 22.50 deep but belonging to Level 13(?)

e 2101 (Fig. 76 7). Pedestal fragment of a "fruit stand," .181* h., .137 d., showing attachment of cup; medium, grit-tempered, well made ware; buff paste; moderately fired; brick red slip on outside; burnished. Found 22 meters deep.

e 2100 (Fig. 70 and Pl. VII). Cup with two band handles from median body to rim and a small concave bottom, convex in interior, .112 h., .115 d.; fine, grit-tempered, very well made ware; buff paste with gray core; moderately fired; dark red slip over exterior and interior; highly burnished. Found 21.95 deep.

e 1735 (Fig. 70 and Pl. VII). Cup with belled rim and flat bottom, concave in center, .107 h., .100 d.; medium, grit-tempered, well made ware; moderately fired; wet-smoothed; outside grayish; burnished. Mortuary gift of e X18, found 21.80 deep but belonging to Level 13(?)

e 2110 (Fig. 78 and Pl. VII). Large vessel with ovoid body and slightly offset, belled neck, .478 h., .365 d.; medium, grit-tempered, very well made ware; buff paste; moderately fired; black slip over all; polished. Burial vessel of e X12, found 21.40 deep but belonging to Level 13.

e 2296 (Fig. 79 and Pl. VII). Large vessel with a short straight neck and a sharp shoulder, .485 h., .491 d.; coarse, grit-tempered, fairly well made ware; moderately fired; black slip over all; polished. Burial vessel of e X15, found 21.30 deep but belonging to Level 13.

e 1879 (Fig. 75 and Pl. VII). Cup fragment of a "fruit stand" with part of attachment to pedestal, .117* h., .209 d.; fine, grit-tempered, very well made ware; moderately fired; dark reddish brown slip with smoke stains over all; burnished. Found 21.30 deep with burial e X15 but belonging to Level 13.

¹⁵ This list describes whole vessels or fragments large enough to suggest the original shapes of the vessels. For the distribution of the various types of sherd see Fig. 32.¹⁶ For the purposes of this and following lists each level includes all refuse between its own floor level and the next one above.¹⁷ The measurements, hereafter abbreviated to the form ".095 h., .219 d.," are given here, as elsewhere, in fractions of meters. Asterisks distinguish dimensions of preserved portions of incomplete objects. In a very few cases only one dimension or none at all could be given. The dimensions given are always the largest ones.

LEVEL 13 (21.20–19.60 m.):¹⁸

- c 1509 (Fig. 76 6 and Pl. VII). Pedestal fragment of a "fruit stand," .085* h., .070 d.; medium, well made ware with traces of grit-temping; gray paste; moderately fired; grayish black slip over the horizontally fluted exterior; burnished. Found 21.20 deep.
- e 1875 (Fig. 75). Cup fragment of a "fruit stand," .093* h., .220 d.; fine, grit-temped, well made ware; heavily fired; thick brownish red slip over exterior and interior; highly burnished. Found 21.30–21.00 deep.
- e 1874 (Fig. 75). Cup fragment of a "fruit stand," .090* h., .200 d.; fine, grit-temped, well made ware; moderately fired; traces of a blackish gray slip over exterior and interior; traces of burnishing. Found 21.30–21.00 deep.
- e 1876 (Fig. 73 and Pl. VII). Fragment of a vessel with a pear-shaped body and an offset neck, .250* h., .236 d.; coarse, grit-temped, well made ware; buff paste; moderately fired; black slip over exterior; burnished. Found 20.90 deep.
- e 1873 (Fig. 72 and Pl. VII). Vessel with wide orifice, slightly curved neck, and cup-base, .250* h., .228 d.; four equidistant knobs project upward from just below slightly offset neck; medium, grit-temped, fairly well made ware; buff paste; moderately fired; wet-smoothed; grayish buff exterior; traces of dingy red and brownish gray slip on rim. Found 21.00–20.50 deep.
- e 1706 (Fig. 75 and Pl. VII). Cup fragment of a "fruit stand," .080* h., .260 d.; fine, grit-temped, well made ware; moderately fired; reddish brown slip over exterior and interior; burnished. Found 21.00–20.50 deep with e 1704–5.
- e 1705 (Fig. 75 and Pl. VII). Cup fragment of a "fruit stand," .086* h., .206 d.; fine, grit-temped, well made ware; gray paste; moderately fired; black slip over exterior and interior; highly burnished. Found 21.00–20.50 deep with e 1704 and e 1706.
- e 1704 (Fig. 75). Cup fragment of a "fruit stand," .095* h., .235 d.; fine, grit-temped, well made ware; buff paste; moderately fired; brownish red slip over exterior and interior; polished. Found 21.00–20.50 deep with e 1705–6.
- e 1877 (Fig. 70 and Pl. VII). Cup with small flat bottom and two diametrically opposed band handles from median body to rim, .110 h., .104 d.; medium, grit-temped, well made ware; buff paste with gray core; moderately fired; brownish black slip over exterior and inside of rim; polished. Found 19.80 deep.
- e 1878 (Fig. 73 and Pl. VII). Jar .110 h., .105 d.; coarse, grit-temped, fairly well made ware; gray paste; heavily fired; grayish brown slip over all; polished.

LEVEL 12 (19.60–18.00 m.):

- c 1689 (Fig. 72). Fragmentary vessel .155* h., .190 d.; it probably had wide orifice and cup-base (both broken off) and four knobs projecting upward from body just below base of offset neck; medium, grit-temped, fairly well made ware; grayish buff paste; moderately fired; wet-smoothed. Found 19.60 deep.
- e 1872 (Fig. 71 and Pl. VII). Vessel with wide orifice and slightly offset neck, .300 h., .262 d.; medium, grit-temped, well made ware; moderately fired; black slip over all; polished. Found 19.60 deep.
- e 2108 (Fig. 69 and Pl. VII). Fragment of cup with one band handle at rim, .094 h., .160 d.; coarse, plant-temped, well made ware; moderately fired; light buff slip over all, darker on the interior; polished. Found 19.50 deep.
- e 1709 (Fig. 73 and Pl. VII). Pitcher with globular body, sharply offset neck, flaring rim, and one band handle extending from median body to below neck, .190 h., .185 d.; semicircular convexity diametrically opposite top of handle; fine, grit-temped, micaeuous, well made ware; moderately fired; red slip on exterior, extending over rim; burnished. Found 19.50 deep.
- e 1620 (Fig. 72 and Pl. VII). Vessel with cup-base, wide orifice, and slightly offset neck, just below which four knobs project slightly upward, .250* h., .220 d.; medium, grit-temped, fairly well made ware; moderately fired; traces of gray slip over all; polished. Found 19.50 deep.
- e 1619 (Fig. 73 and Pl. VII). Pear-shaped cup(?) .200 h., .210 d.; coarse, grit-temped, well made ware; moderately fired; black slip over exterior; highly polished. Found 19.50 deep.
- e 1618 (Fig. 76 3 and Pl. VII). Pedestal fragment of a "fruit stand," .155* h., .122 d.; medium, grit-temped, well made ware; heavily fired; brownish buff slip over the diagonally fluted exterior; highly polished. Found 19.50 deep.
- e 1617 (Fig. 75 and Pl. VII). Pedestal fragment of a "fruit stand," .286* h., .142 d.; coarse, grit-temped, well made ware; moderately fired; black slip over the horizontally fluted exterior; highly polished. Found 19.50 deep.

¹⁸ Levels 13 and 12 were ascribed in 1930 to the Copper Age (OIC No. 14, p. 23).

- e 577 (Fig. 70 and Pl. VII). Small goblet with cup-base and probably four knobs (only two preserved) projecting upward just below rim, .122 h.; medium, grit-tempered, well made ware; grayish buff paste; moderately fired; wet-smoothed. Found 19.40 deep.
- e 2751 (Pl. VII). Fragment of bowl with flat bottom, .045 h., .140 d.; coarse, grit-tempered, fairly well made ware; moderately fired; wet-smoothed; grayish brown. Found 19.20 deep.
- e 2750 (Fig. 69 and Pl. VII). Fragment of bowl with rounded bottom, .060 h., .200 d.; fine, grit-tempered, very well made ware; moderately fired; brownish slip over exterior and interior with smoke stains giving a mottled effect; well burnished. Found 19.20 deep.
- e 2749 (Fig. 69 and Pl. VII). Fragment of bowl with flat bottom, .049 h., .228 d.; coarse, grit-tempered, fairly well made ware; gray paste; moderately fired; wet-smoothed. Found 19.20 deep.
- e 2298 (Fig. 78 and Pl. VII). Fragmentary large vessel with straight, short, slightly offset neck, .475* h., .495 d.; ovoid body; coarse, grit-tempered, well made ware; black paste; moderately fired; wet-smoothed; slightly polished. Found 19.20 deep.
- e 2297 (Fig. 80). Fragment of large vessel apparently with four band handles at rim, .300* h.; coarse, grit-tempered, well made ware; moderately fired; blackish gray slip over exterior, dingy red toward rim and inside of it; polished. Found 19.20 deep.
- e 1870 (Fig. 74 and Pl. VII). Large vessel .500* h., .330 d., similar to e 1870. Found 19.20 deep.
- e 1708 (Fig. 72 and Pl. VII). Vessel with cup-base and wide orifice, .260 h., .190 d.; on the shoulder four large knobs, slightly depressed in the middle, project upward; medium, grit-tempered, fairly well made ware; moderately fired; traces of gray-brown slip on base and rim; polished. Found 19.20 deep.
- e 2102 (Fig. 71 and Pl. VII). Vessel with wide orifice and slightly offset neck, .330 h., .300 d.; medium, grit-tempered, well made ware; moderately fired; black slip over all; burnished. Found 19 meters deep.
- e 2748 (Pl. VII). Fragment of flat bowl, .025* h., .077 d.; fine, grit-tempered, well made ware; moderately fired; black slip over all; highly polished exterior.
- e 2747 (Fig. 70 and Pl. VII). Fragment of cup with small flat bottom and belled rim, .089 h., .112 d.; fine, grit-tempered, very well made ware; moderately fired; traces of grayish brown slip; polished.
- e 2746 (Fig. 70 and Pl. VII). Fragment of a cup, .067* h., with two handles(?) with triangular cross-section extending from bottom to rim; fine, grit-tempered, well made ware; moderately fired; black slip over all; highly polished exterior.
- e 1661 (Fig. 65 9). Fragment of a rectangular vessel or container .058* h., .063* wide; coarse, grit-tempered, well made ware; moderately fired; grayish buff slip; burnished; incised ornament.
- e 1615 (Fig. 77 1), e 1616 (Fig. 75 and Pl. VII), and e 2324 (Fig. 77 4). Pedestal fragments of "fruit stands" (e 1615, .105* h.; e 1616, .215* h.; e 2324, .088* h.); coarse, grit-tempered, well made ware; moderately fired; grayish buff slip on outside; polished.
- e 1530 (Fig. 67 10). Rim piece of bowl; medium, grit-tempered, well made ware; heavily fired; black slip over all; fluted interior; incised zigzag band on lip of rim; highly polished.

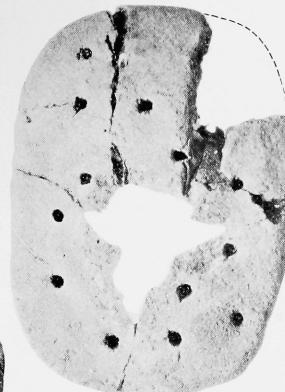
Pottery figurines are described on pages 78-81; a pottery seal on pages 81-82; and minor pottery objects, including "whorls," on pages 93-100. For analyses of pottery see *OIP XXX* 336 f.

FIGURINES

The human figurines are primitive (Fig. 85). Two heads (e 506 and e 1940) and one complete figurine (e 598) have very pronounced noses. The rest of the head is not modeled at all, but forms a kind of vertical "aureole." Nos. e 506 and e 1940 have perforations at both sides of the head, probably for the addition of earrings or other ornaments of another material. No. e 598, with indications of arms, shows the transition from flat idols, of which three specimens (e 482-83 and e 551) were found. No. e 551 is roughly rectangular with rounded corners and is irregularly punctate on one side. Nos. e 482-83 are roughly triangular. Along the



e 506



e 551



e 1940



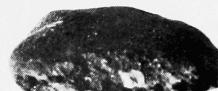
e 483



e 482



e 598



e 2026



e 1742



e 2025



e 290



e 1744

FIG. 85.—FIGURINES. ACTUAL SIZE

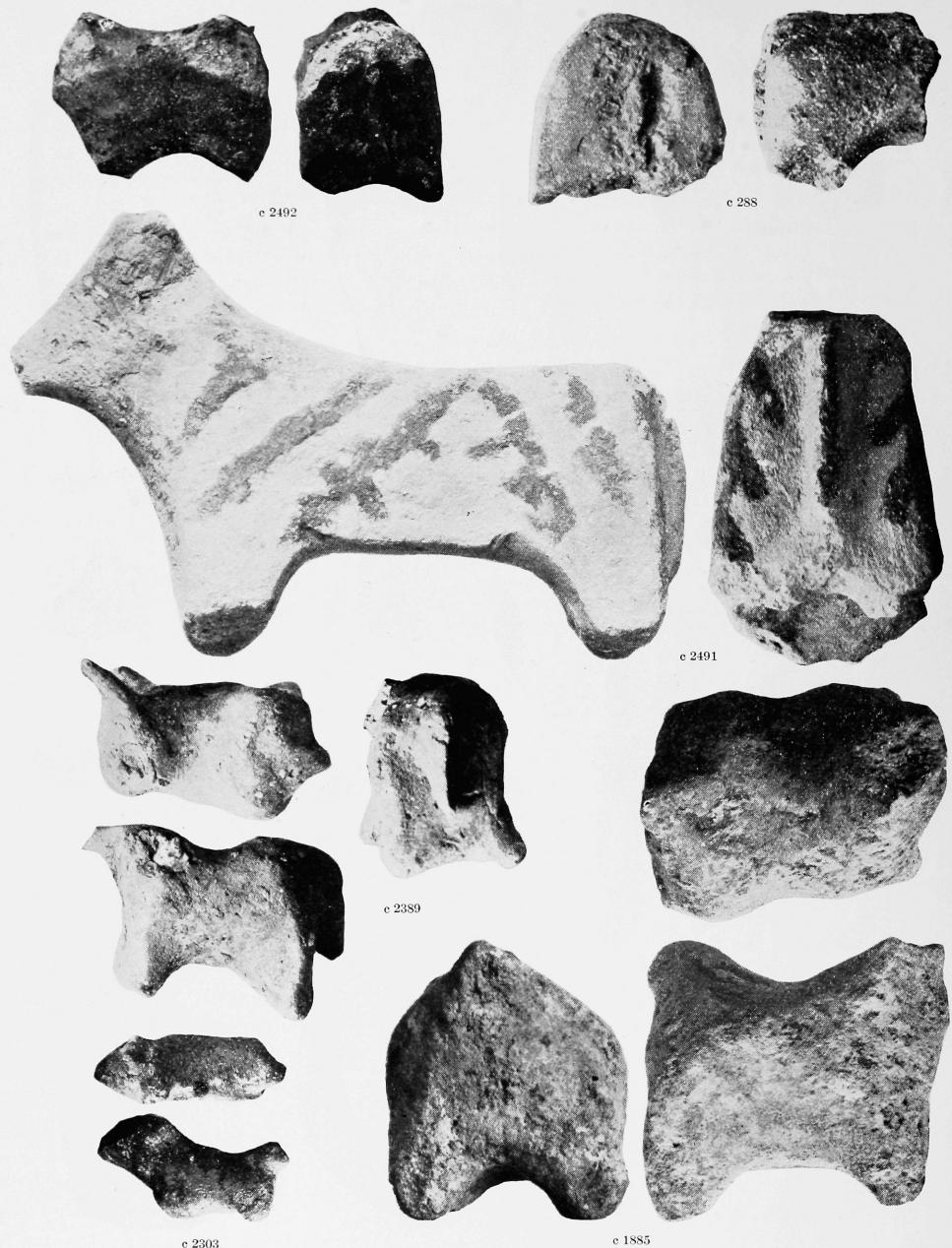


FIG. 86.—ANIMAL FIGURINES OF POTTERY. ACTUAL SIZE

base of each figure is a row of holes, probably for the insertion of ornaments of another material.¹⁹ No. e 2026, of stone, may be a primitive idol with slightly offset head. No. e 1732 (Fig. 100) may be the head of a large idol, but I prefer to see in it the upper part of a large andiron in the form of a human face; its attribution to this period is uncertain (cf. p. 93).

All the animal figurines found were made of pottery (Figs. 85–86). Predominant are figurines of animals with block-shaped bodies, legs barely indicated by short stumps, and prominent tails (c 2492, c 288, c 2303, and c 1885). No. e 2389 is a horned animal, probably bovine. No. e 2025 (Fig. 85) is a fragment of a very long-necked animal. Perhaps the horns c 290 and e 1742 and the split-hoofed foot e 1744 (Fig. 85) belonged to larger bovine figurines. By far the best animal figurine is No. e 2491, which is decorated with brownish black stripes on grayish buff (Fig. 86).



FIG. 87.—STAMP SEALS AND A SEAL IMPRESSION. ACTUAL SIZE

DISTRIBUTION BY LEVELS

LEVELS 19–17 (29.00–25.60 m.): None.

LEVEL 16 (25.60–24.80 m.): c 2491–92 (Fig. 86).

LEVEL 15 (24.80–23.50 m.): c 2389 and c 2303 (Fig. 86).

LEVEL 14 (23.50–21.20 m.): e 2025–26 and e 1940 (Fig. 85), the last found with "fruit stand" e 2101.

LEVEL 13 (21.20–19.60 m.): c 1885 (Fig. 86), e 1744 (Fig. 85), e 1743 (cf. c 2492), and e 1742 (Fig. 85).

LEVEL 12 (19.60–18.00 m.): e 1570 (cf. c 2492), c 598, c 551, c 506, c 482–83, c 290 (Fig. 85), and c 288 (Fig. 86).

SEALS (FIG. 87)

Four stamps were found, one each of stone (e 1909), copper (c 1481), pottery (c 481), and lead (c 576). No. e 1974 is a fragmentary sun-dried mud brick which shows an impression of

¹⁹ Cf. H. Schmidt, *Heinrich Schliemann's Sammlung trojanischer Altertümern* (Berlin, 1902) p. 302, Nos. 8803–30, who calls this kind of object "Bürstengriffe."

a circular stamp. As far as can be recognized, the seal pattern consisted of crossed lines forming small triangles.

The bases of the stamp seals are nearly circular with the exception of No. c 1481, which is rectangular. In each case the design is cross-shaped. On No. c 576 the broad lines of the design are decorated with a fine herringbone motive, and a broad raised edge surrounds the whole design. Seals e 1909 and c 481 are conical with slightly concave sides. Each had a perforation near the rounded top. A stem is soldered to the rectangular base of No. c 1481; there was probably a small perforation near its upper end. No. c 576 is a disk with a small perforated knob in the center of the back.

DISTRIBUTION BY LEVELS

LEVELS 19-18 (29.00-27.00 m.): None.

LEVEL 17 (27.00-25.60 m.): e 1974, fragment of mud brick with impression of circular stamp.

LEVELS 16-14 (25.60-21.20 m.): None.

LEVEL 13 (21.20-19.60 m.): e 1909, stone stamp; c 1481, copper stamp.

LEVEL 12 (19.60-18.00 m.): c 576, lead stamp; c 481, pottery stamp.

STONE OBJECTS

Most of the stone objects found in the Chalcolithic layers show forms which appear in nearly all the later periods, so that no particular types can be differentiated.

The forms of chalcedony and flint objects show little variation (Fig. 88). Most of them are simple knife blades, either secondary or primary. Similar pieces have been found down to the Byzantine period. Several show one serrated edge. Nos. e 1989-90, e 2064, and e 2068 each have at one end a larger indentation which may have served for attachment to the handle. Upon Nos. e 2121 and e 2023 such indentations appear on both sides. A flint knife blade (e 2240, Fig. 43) was found with skeleton e X19. Cores or scrapers such as Nos. e 2128 and e 1741 were found in great quantities.

Obsidian blades of very much the same type and form as those described above appear from the very early layers of the Chalcolithic age on (Fig. 89). No. c 2224 shows the upper end of a blade which seems to have a tang. Flakes (e.g., c 2181 and e 1991) and cores or scrapers (e.g., e 2035 and e 1903) also appear. A few rather well worked arrowheads (e.g., c 265 and e 1765) were found. No. e 1953 is a rough point. Various objects were made of other stones. For maceheads marble, serpentine, and diorite were used. It is interesting that already in this period nearly all the possible forms of maceheads appear (Fig. 90). No. c 2688 is globular; No. e 2241 is slightly pear-shaped; No. c 393 is horizontally oval; No. c 2689 is vertically oval. No. e 2241 is a fragment of a serpentine macehead found with skeleton e X19 (see Fig. 43). No. e 2131, of marble, may be an unperforated macehead or a hammerstone.

Among the hammer axes (Fig. 90), of the same materials as the maceheads, no characteristic form can be distinguished. Some have round or oval cross-sections; some are rectangular with rounded corners. The blunt ends are almost rounded, while the "cutting edges" seem generally to have been parallel to the bore. The form of No. e 1739 is unusual.

Miscellaneous stone objects are shown in Figure 91. Numerous polishing stones (pebbles) have been found in all levels of the mound; each has one or more flattened sides (e.g., c 1662, c 1936, c 2395, and c 2493). More or less flat stones perforated at one end (e.g., c 1933-34 and c 1665) have been found in great numbers also. The materials are usually slate, limestone, or diorite. These pieces, as well as sandstone tools such as Nos. c 1833 and e 1830, seem to



FIG. 88.—CHALCEDONY AND FLINT OBJECTS. ACTUAL SIZE

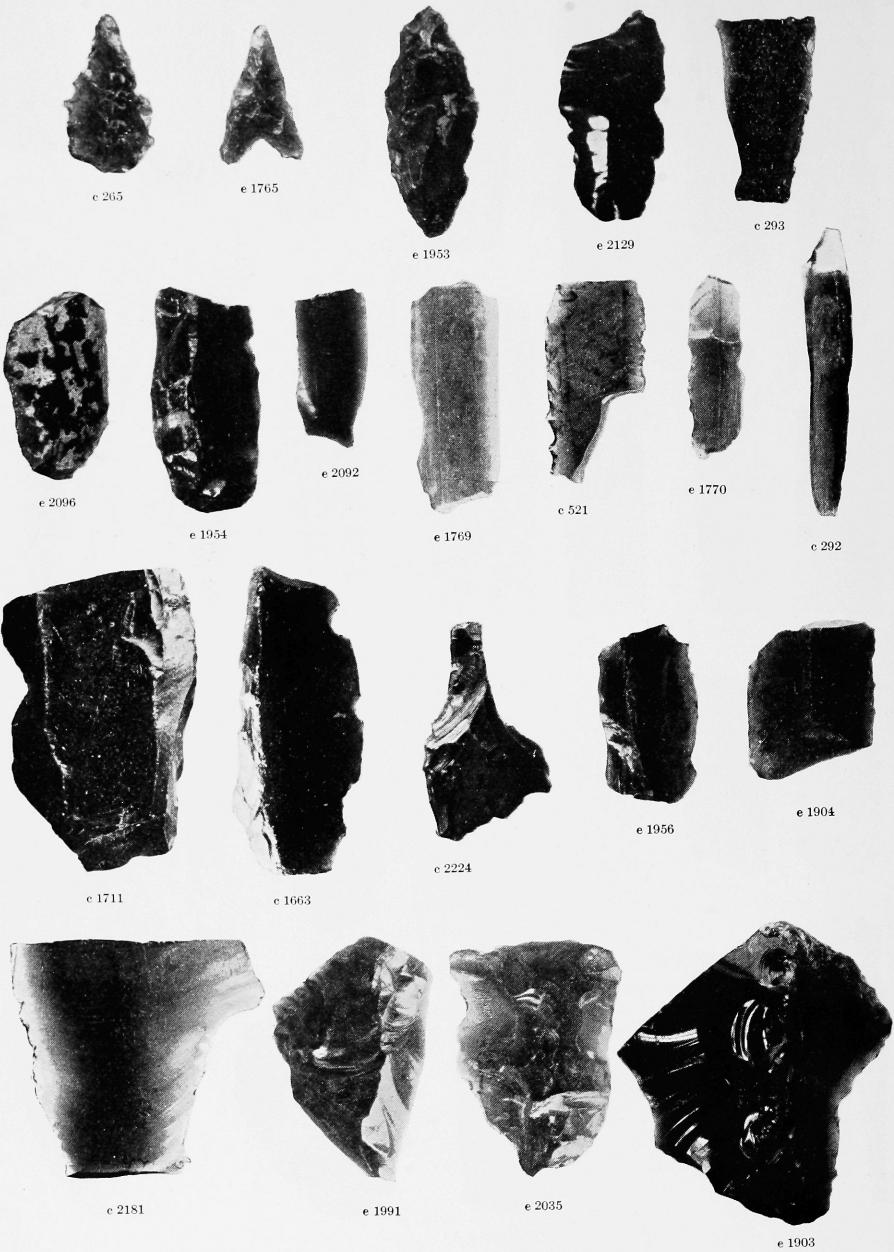


FIG. 89.—OBSIDIAN OBJECTS. ACTUAL SIZE

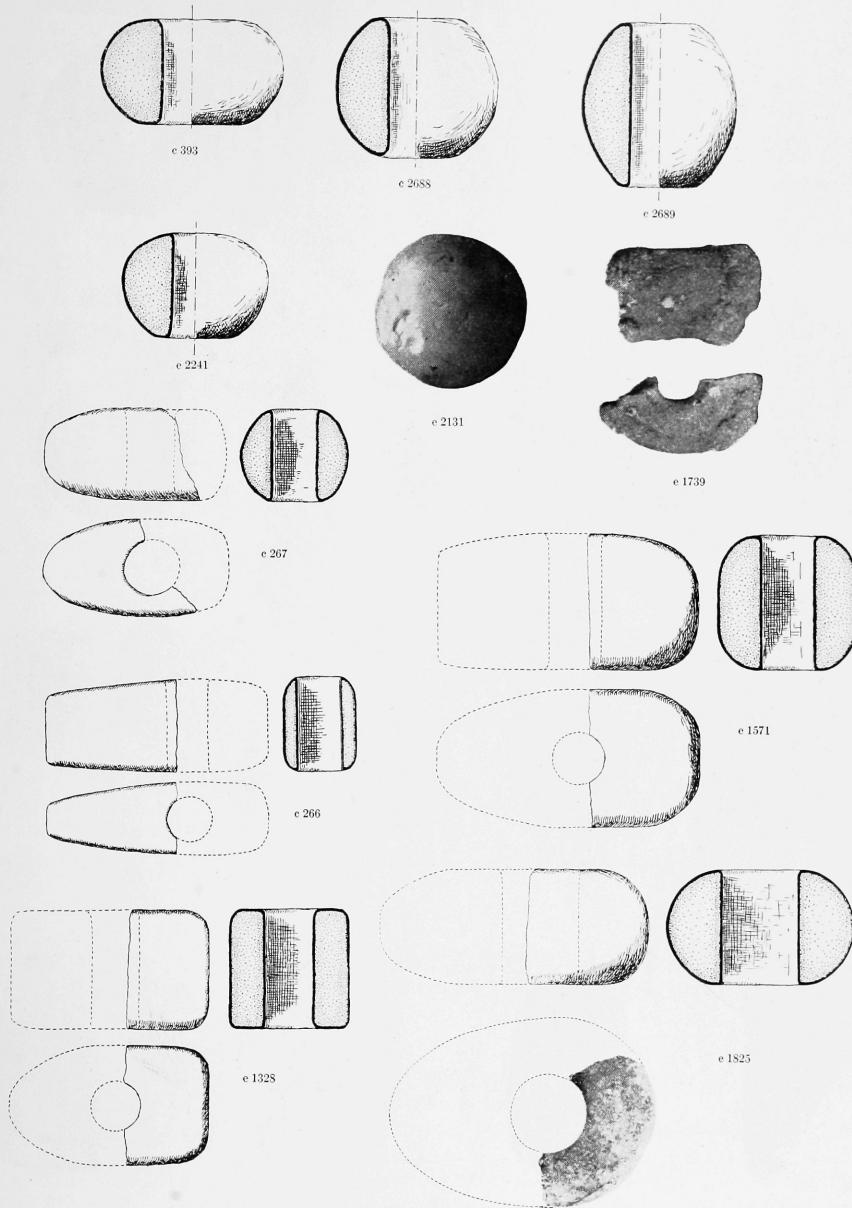


FIG. 90.—MACEHEADS AND HAMMER AXES. SCALE, 1:2

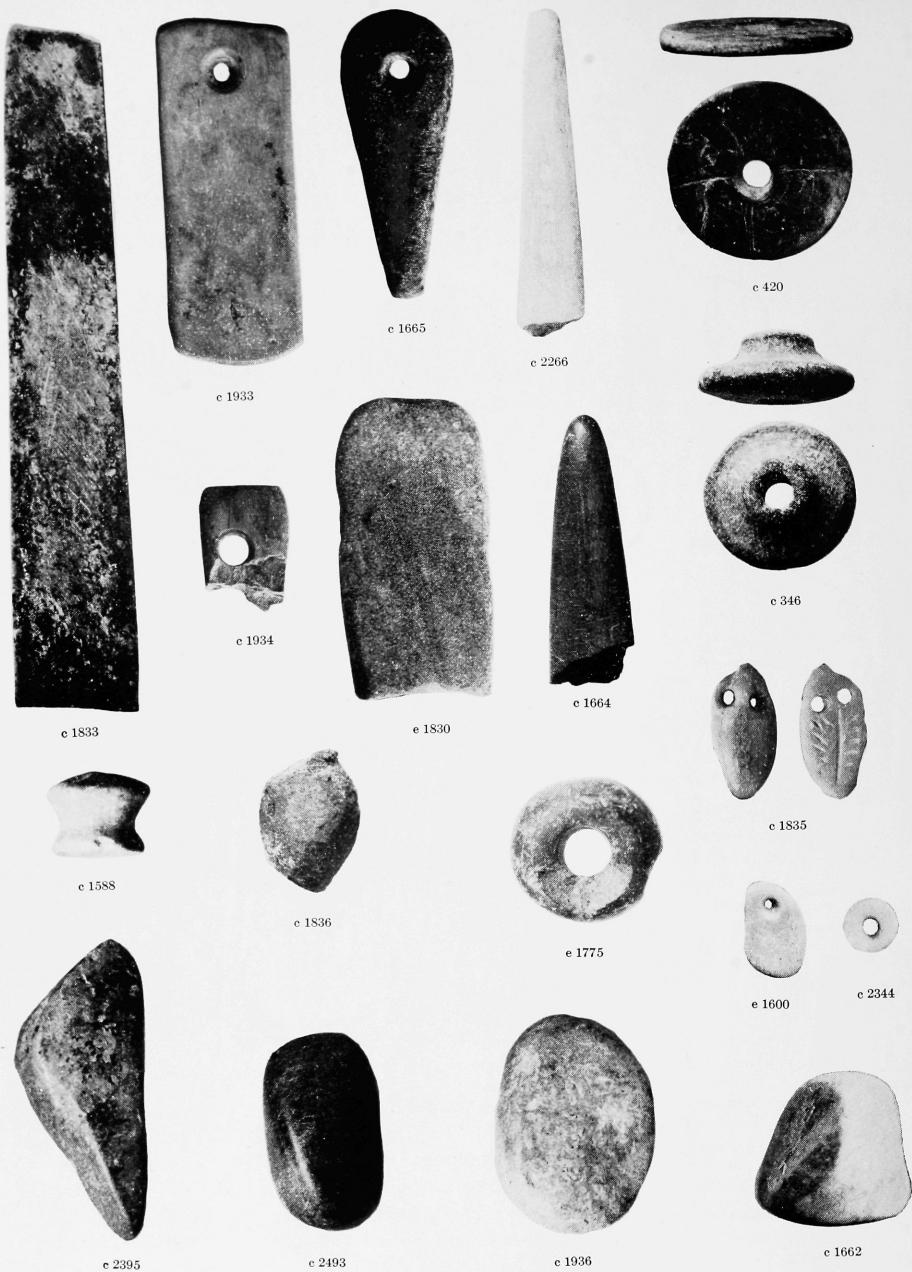


FIG. 91.—MISCELLANEOUS STONE OBJECTS. ACTUAL SIZE

have served to sharpen or polish objects. Fragments of drill cores (e.g., c 1664 and c 2266) also appear in a surprisingly great number and seem to have been used for various purposes. No. c 1588 may have been part of a handle. No. c 346 and the perforated disk c 420 may be "whorls." Nos. c 1835 and e 1600 represent a group of small pendants, and No. c 2344 shows the typical form of small stone beads, of which several have been found. Nos. e 1775 (Fig. 91) and e 1774 are larger beads or "whorls," both made of serpentine. Besides the above mentioned objects several pieces of ruddle (e.g., c 1836), hand mills, grinding stones, and pestles of various sizes have been found.

For a figurine and a seal of stone compare pages 81-82. For remarks on obsidian see *OIP XXX* 328.

BONE OBJECTS

One of the typical small objects of this period was the flat bone awl with a sharp point, which appeared from the earliest building levels of the Chalcolithic age up to the end of the period and even into the first building level of the Copper Age. Another characteristic feature of the Chalcolithic age is the profuse use of staghorn.

The typical flat bone awl was slightly convex with an acuminate apex and highly polished edges (Fig. 92). A few awls made of joint bones, like those typical of the Copper Age (cf. p. 193 and Fig. 193), were found in the refuse layers of the last two settlements of the Chalcolithic age. The following list shows the distribution of flat awls and joint awls within the various building levels of the Chalcolithic period as well as the appearance of flat awls in the oldest Copper Age layers.

DISTRIBUTION OF BONE AWLS BY LEVELS

LEVEL 19 (29.00-27.80 m.): Flat awl e 2150, 28.25 deep.

LEVEL 18 (27.80-27.00 m.): None.

LEVEL 17 (27.00-25.60 m.): Flat awls e 2054, 27.00 deep; e 1984 and e 1980-81, 26.30 deep.

LEVEL 16 (25.60-24.80 m.): Flat awls e 2622 (Fig. 92) and e 2537, 25.60 deep; e 2538 (Fig. 92), c 2498-99.

LEVEL 15 (24.80-23.50 m.): Flat awls e 2153, 24 meters deep; e 2142, 23.90 deep; c 2453-54, c 2452 (Fig. 92), c 2450-51, c 2449 (Fig. 92), c 2448, c 2444 (Fig. 92), c 2313-14, c 2310, c 2308 (Fig. 92), c 2307, c 2278, c 2276 (Fig. 92), c 2273-75, c 2235, c 2229-33, c 2184-85.

LEVEL 14 (23.50-21.20 m.): Flat awls e 1739, 23.50 deep; e 1738 (Fig. 92) and e 2060-61, 23.30 deep; e 2028-30, e 1941-42, c 1944-46, c 1943 (Fig. 92), c 1942, c 1940-41 (Fig. 92), c 1939.

LEVEL 13 (21.20-19.60 m.): Flat awls e 1922, e 1906, e 1831, c 1592-95, c 1514, c 1513 (Fig. 92), c 1512; joint awls e 1796-97, e 1736, c 1483.

LEVEL 12 (19.60-18.00 m.): Flat awls e 1659-60, e 1609, e 1549, e 1498-1500, e 1466-69, c 584, c 422-23; joint awls e 1576-79, e 1550-51, e 1525-26, e 1495-97, e 1394, e 1332, e 261-62, c 245-46.

LEVEL 11²⁰ (18.00-14.70 m.): Flat awls e 969, e 789, e 759, e 716, e 714; joint awls now common; see page 193.

Pointed bone splinters of various sizes and of various kinds of bones are frequent. No particular shape seems to be predominant (Fig. 93). They are somewhat like the bone splinter awls of the Copper Age, but in general the splinters are larger.

A few bone splinters taper to a more or less fine point at one end and are flattened at the other end, usually a joint (e.g., c 1837 and e 1943-44, Fig. 94). They may have been pins or, if perforated, weaving needles. A small, well polished, perforated bone splinter (c 1710, Fig. 94) may have been a small needle. Very interesting is No. c 1709, a bone splinter with a very

²⁰ Copper Age.

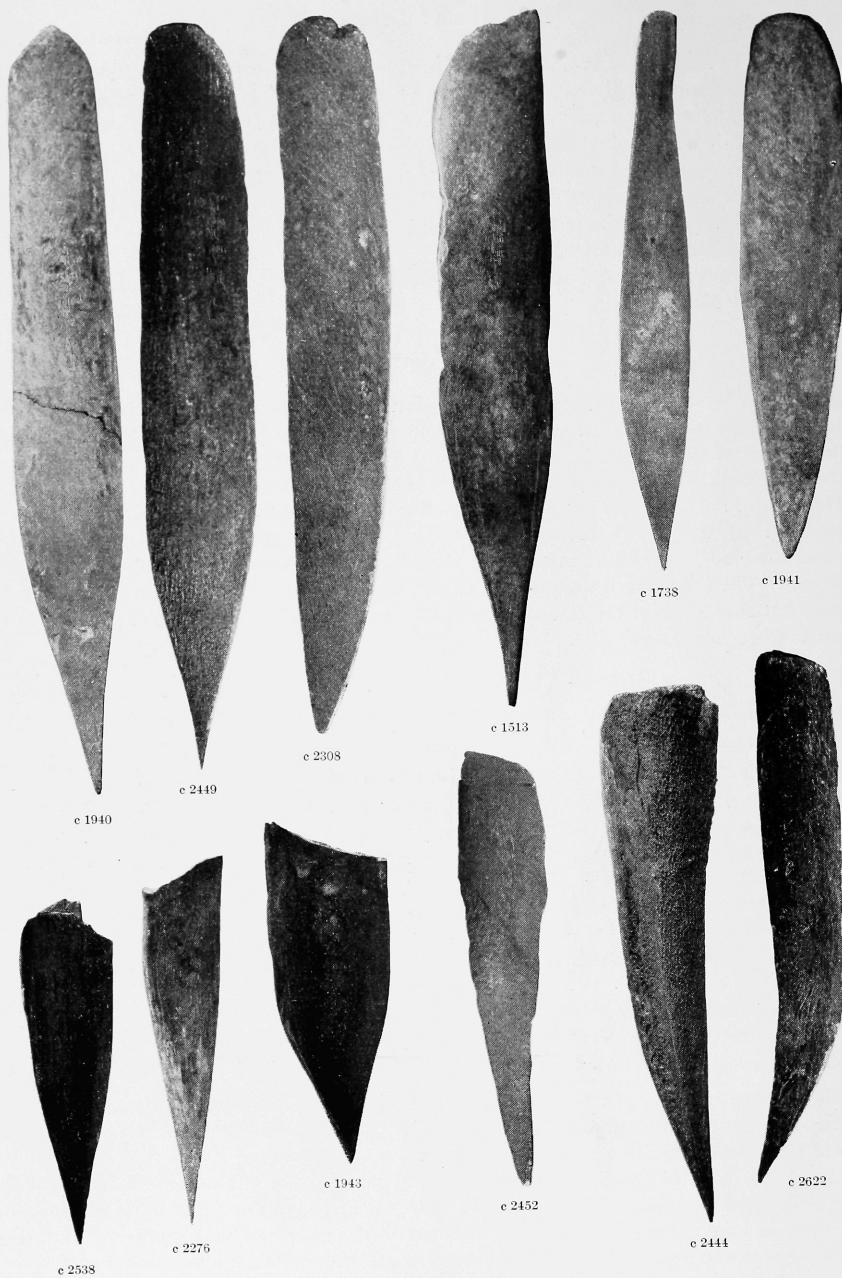


FIG. 92.—FLAT BONE AWLS. ACTUAL SIZE



FIG. 93.—AWLS (BONE SPLINTERS). ACTUAL SIZE

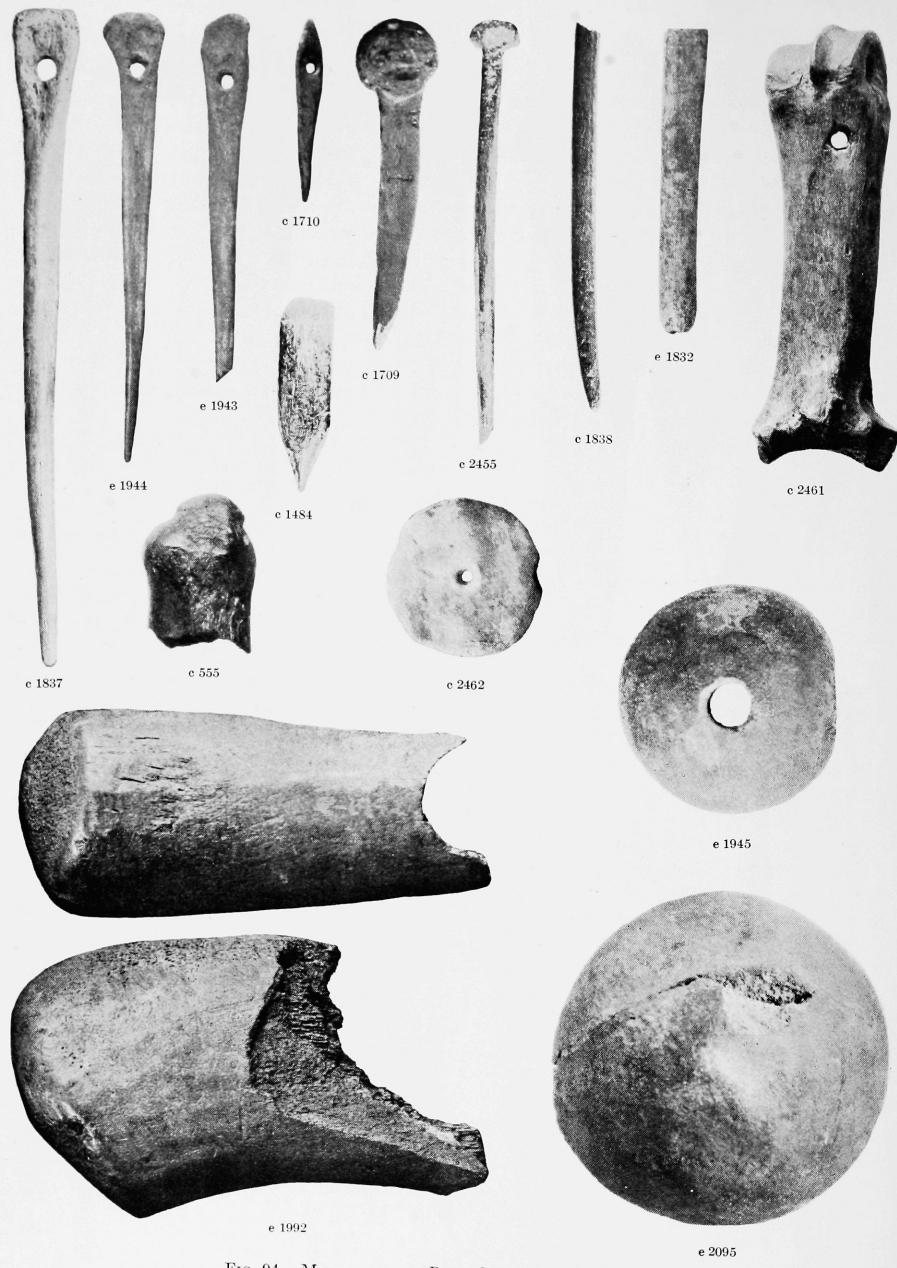


FIG. 94.—MISCELLANEOUS BONE OBJECTS. ACTUAL SIZE

sharp point and a globular pottery head. No. c 2455 is a pin with a hemispherical head. Only a few other fragments of pins were found (e.g., c 1838).

Miscellaneous bone objects are shown in Figure 94. Several femur heads, both perforated and unperforated, were found (e.g., e 2095). No. e 1945 is a perforated humerus head. A small bone disk (c 2462) is well polished and shows in the center a perforation bored from both sides. Some sheep knucklebones, perforated or unperforated and sometimes flattened on one side, were found, as well as a few bones showing a perforation near the joint (e.g., c 2461). Several tubes (e.g., e 1832) seemingly used for polishing appeared. This type of object later becomes very frequent. No. c 555 may have been the top of a handle. No. c 1484 is a fragment of a pointed object with oval cross-section—a form which appears very frequently in the cultural deposits of the first millennium B.C. on the Alisar mound.

In Level 17 the blunt half of a staghorn ax was found (e 1992, Fig. 94). Several other fragments of staghorn (Fig. 95) show carving; they may have been parts of either axes or handles. Antler tips, sometimes burned, were frequently found.

For shells and unwrought animal bones see *OIP XXX* 324–27 and 294–309.

METAL OBJECTS

COPPER

In all levels of the Chalcolithic period copper was extremely rare. In most instances only traces or very small fragmentary objects (e.g., e 1472 and e 1801, Fig. 96) were found. Their original form was usually unrecognizable, and they sometimes seem to have been nothing but small lumps of copper. A few recognizable objects are illustrated in Figure 96. From the refuse layers of the highest building level came fragments of two blades (c 289 and c 419) and of a pair of earrings (e 1580). A point (arrowhead?) with rectangular cross-section (e 1503), typical of the Copper Age, may be an intrusion from a higher level.

In the refuse layer of Level 13 two pins were found, one with a globular head (c 1482) and one with a scrolled head (c 2463). From the same level came an object with oval cross-section and one rounded and one pointed end (e 1886). A pair of bracelets with overlapping ends (e 2038, Fig. 52) was found with skeleton e X12.

The only recognizable copper objects of the older settlement layers were two bracelets with overlapping ends (e 2236–37, Fig. 43) found as mortuary gifts of skeleton e X19. Several small pieces of bent wire may have been used as earrings.

A copper stamp seal is described on pages 81–82.

Analyses of some metal objects are published in *OIP XXX* 338 f.

SILVER

The only silver objects found in this cultural deposit were earrings e 2238–39 (Fig. 43) found with skeleton e X19.

LEAD

Small pieces of lead appeared in the later levels of this period. A lead stamp seal is described on pages 81–82.

DISTRIBUTION BY LEVELS²¹

LEVEL 19 (29.00–27.80 m.): None.

LEVEL 18 (27.80–27.00 m.): One fragment.

²¹ Copper unless specified otherwise.

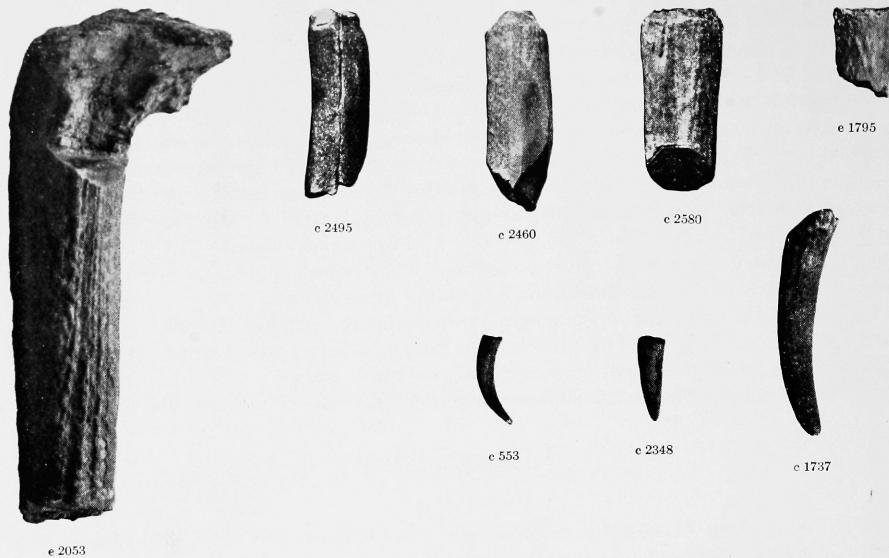


FIG. 95.—OBJECTS OF STAGHORN. SCALE, 1:2

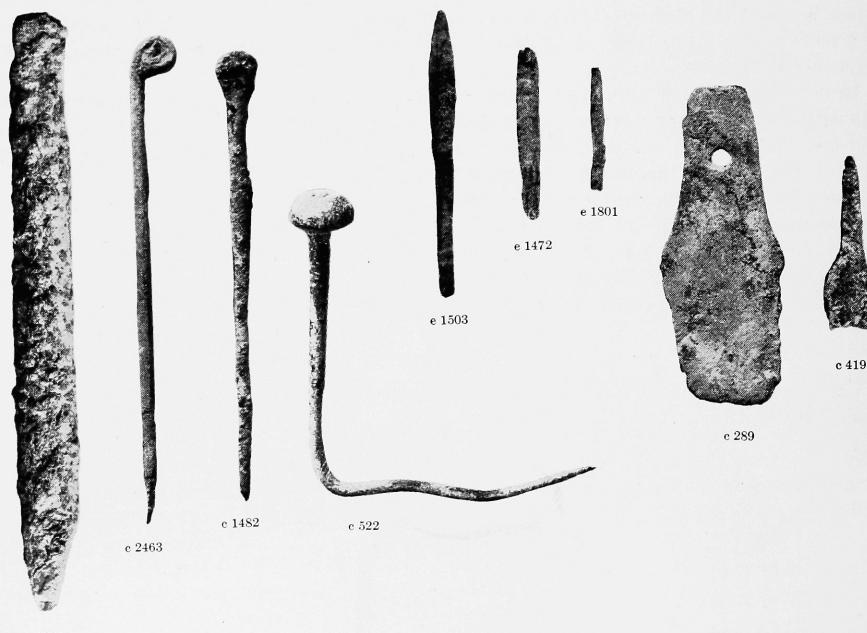


FIG. 96.—COPPER OBJECTS. ACTUAL SIZE

LEVEL 17 (27.00–25.60 m.): e 2058, fragment; a few small fragments.

LEVELS 16–15 (25.60–23.50 m.): A few small fragments.

LEVEL 14 (23.50–21.20 m.): e 2037, fragment, 21.95 deep; e 2236–37 (Fig. 43), bracelets (mortuary gifts of e X19); e 2238–39 (Fig. 43), silver earrings (mortuary gifts of e X19); e 1930, fragment of lead; small fragments.

LEVEL 13 (21.20–19.60 m.): e 2038 (Fig. 52), bracelets (mortuary gifts of e X12), 21.40 deep; e 1801 (Fig. 96), fragment; e 1698, fragments; e 2465, fragment of pin; e 2464, point; e 2463 (Fig. 96), pin with scrolled head; e 1887, fragmentary point; e 1886 (Fig. 96), point; e 1482 (Fig. 96), pin; e 1481 (Fig. 87), stamp seal.

LEVEL 12 (19.60–18.00 m.): e 1580, fragments of earrings; e 1554, fragment; e 1503 (Fig. 96), point; e 1472 (Fig. 96), fragment; e 576 (Fig. 87), lead stamp seal; e 552, point; e 523, twisted wire; e 522 (Fig. 96), pin; e 509–10, pins; e 508, fragmentary point; e 419 (Fig. 96), blade; e 289 (Fig. 96), blade; e 243, earrings(?); small fragments.

MINOR OBJECTS OF POTTERY OR CLAY

Miniature vessels, most of them poorly made of coarse ware, were found in all layers and were not especially interesting. Type pieces are shown in Figure 97. Nos. e 2340 and e 2390–91 were found in the refuse layers of Level 15. No. e 1736 is from Level 14; Nos. e 1586 and e 1611–12 are from Level 13; Nos. e 268, e 421 (with a lateral spout), and e 1391 are from the refuse layers of Level 12. Nos. e 268 and e 1612 each had a handle, and the former is decorated with four knobs on the body.

The "whorls" (Fig. 98) are usually very poorly made and for the greater part seem to have been accidentally fired and not actually baked. Two main types characteristic of this period may be differentiated. The elongated type seems to be the older and disappears with the end of the Chalcolithic age. The second type is discoid, thicker in the middle around the perforation (e.g., e 507 and e 581). No. e 1510 is a variant of this form. The second type appears sporadically in the layers of the Copper Age also. The other shapes are not peculiar to the Chalcolithic period.

Several "nests" of pyramidal objects with rounded tops and small perforations at one end have been found. These objects are most probably loom weights. The three groups illustrated in Figure 99 (e 2103a–e, e 2104a–e, and e 2105a–d) were found in Level 13. Nos. e 2104a–e and e 2105a–d were lying on the tamped earth floor on the east side of the plot (cf. Fig. 44).

Of problematical use or meaning are reworked potsherds such as Nos. e 1831 and e 2394 (Fig. 100). Such objects appear frequently in all later periods.

Beads of various sizes appeared in all levels; most of them are crudely fashioned and poorly fired. No. e 1824, however, is well made and well fired (Fig. 100). It is ornamented with six pairs of white inlaid concentric rings. This type, with slight modifications, appears on the Alişar mound until the end of the Hittite period and may be the prototype of the later eye beads.²²

A great variety of other objects was found, most of them very fragmentary, and all of problematical character. Figures 100–101 give a selection of such objects. Nos. e 554 and e 1733 resemble the "cakes" which appear frequently later. No. e 1732 may be the head of a large idol, although I prefer to see in it the upper part of an andiron in the form of a human face. Andirons appear in the Copper Age and become frequent in the Early Bronze Age. It is quite possible that this piece is intrusive here and actually belongs to the Copper Age. No. e 2534 is a small pendant with a roughly incised design and two perforations near the edge. No. e 1735 might be a spout re-used as a funnel. Nos. e 1707–8 are of unbaked clay; No. e 1587, of coarse gray ware, might be the handle of a very roughly made vessel. No. e 1585, of burnished

²² Cf. *OIP* XXIX, Figs. 309 and 510.

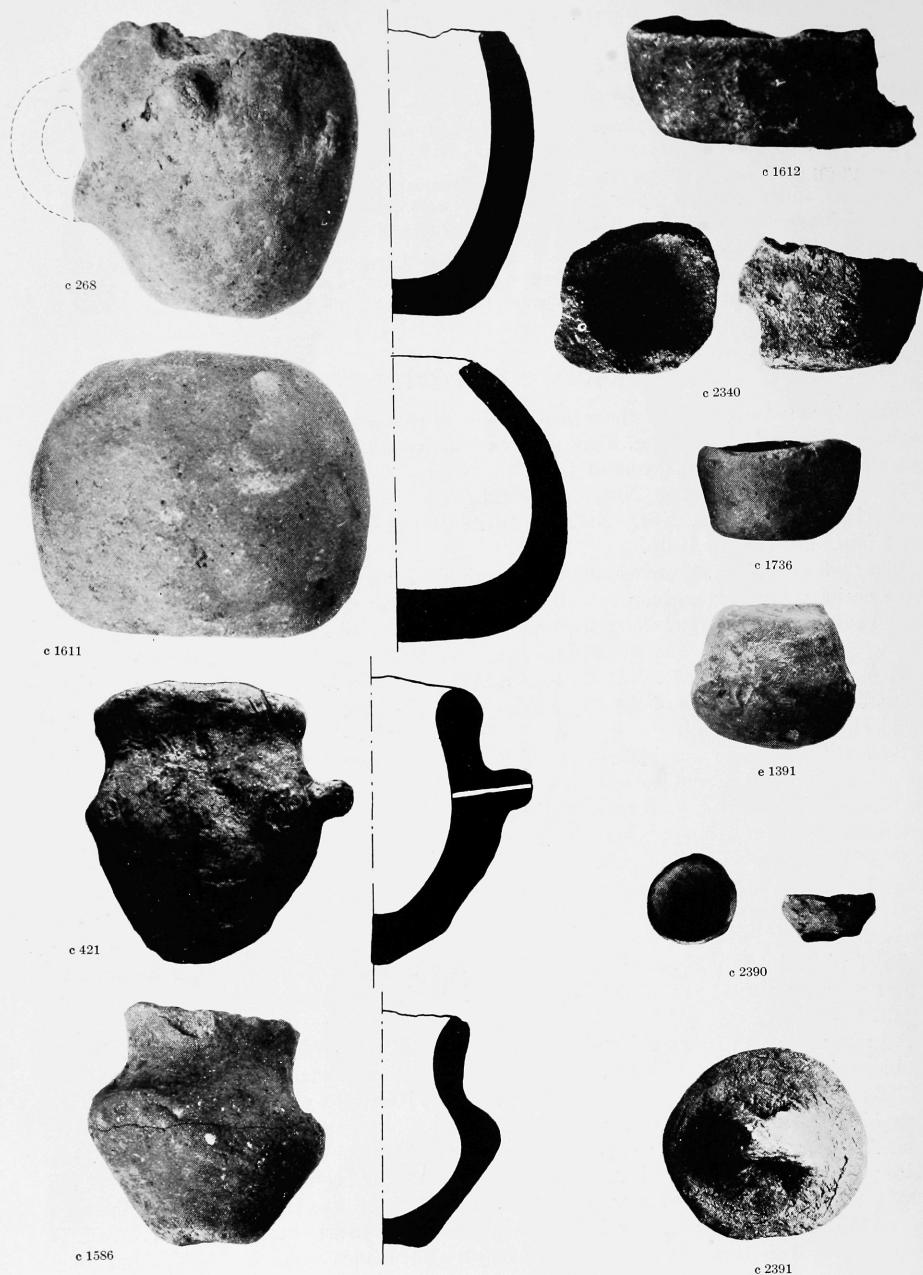


FIG. 97.—MINIATURE VESSELS. ACTUAL SIZE

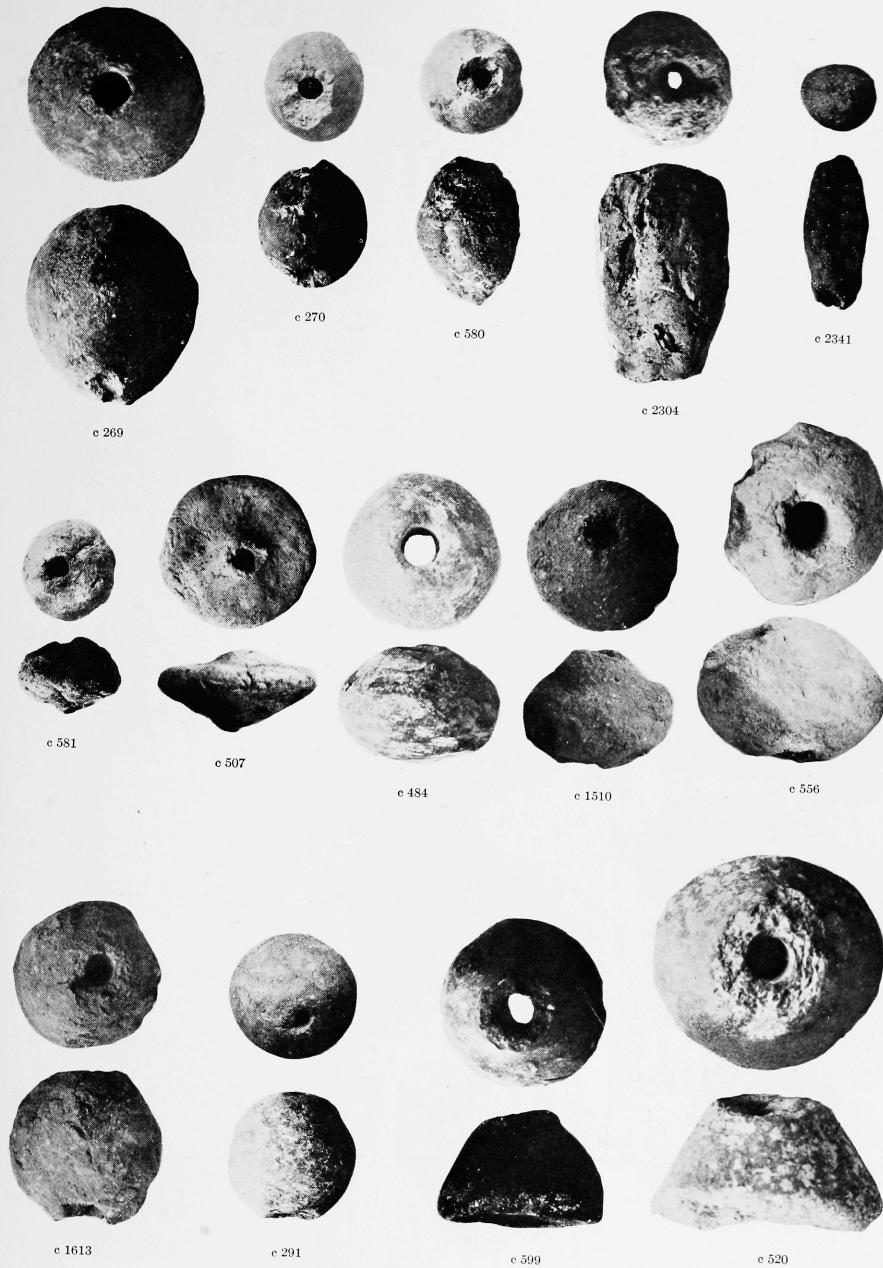


FIG. 98.—POTTERY "WHORLS." ACTUAL SIZE

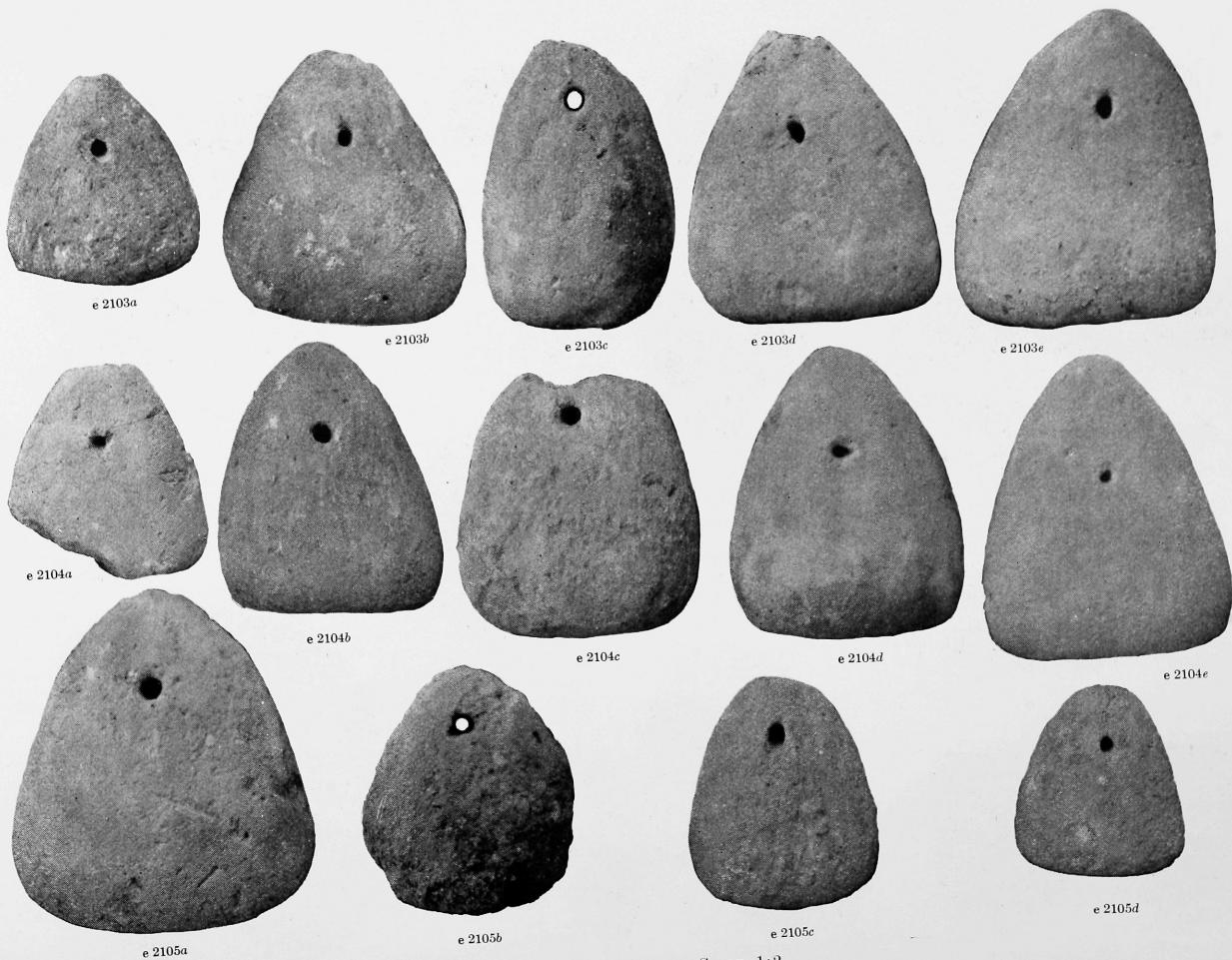


FIG. 99.—LOOM WEIGHTS. SCALE, 1:2

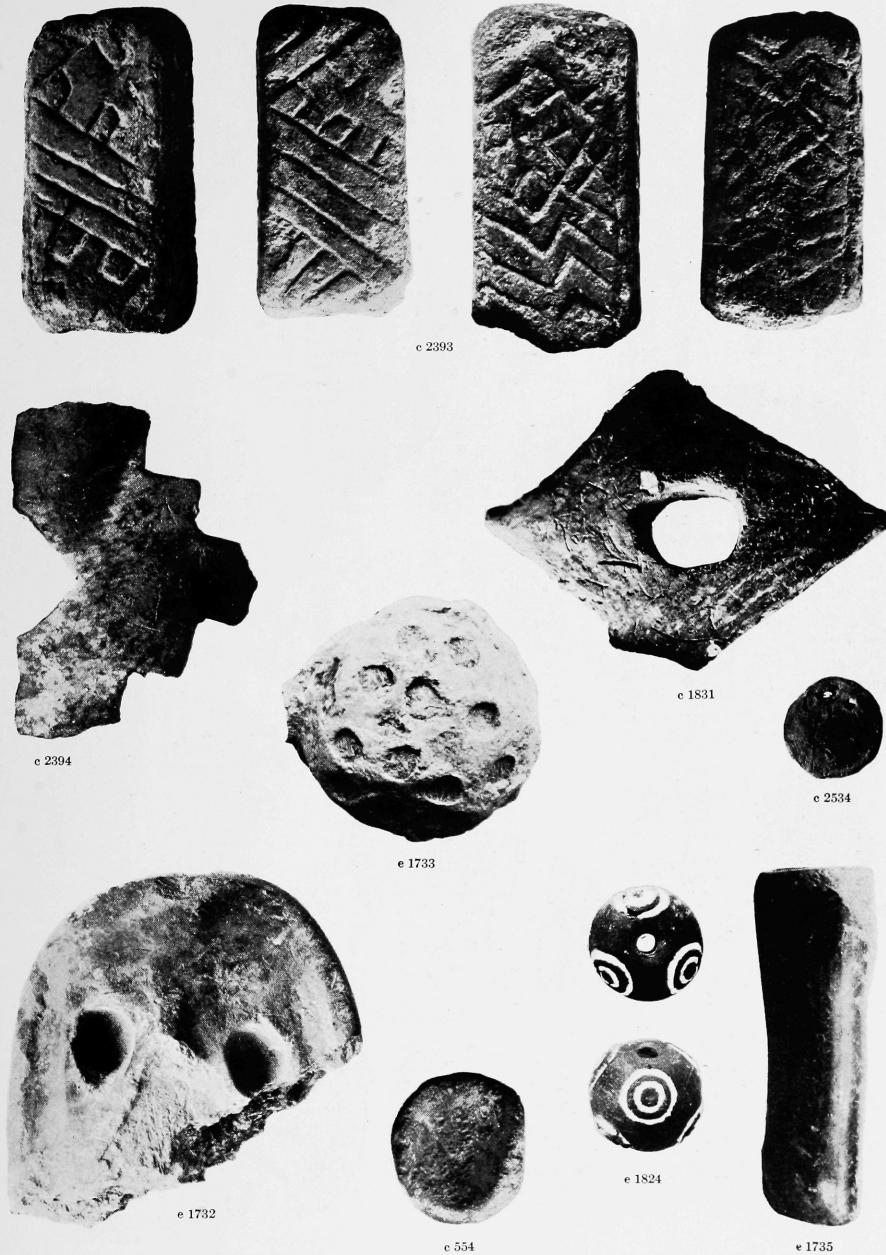


FIG. 100.—MISCELLANEOUS POTTERY OBJECTS. ACTUAL SIZE



FIG. 101.—MISCELLANEOUS POTTERY OBJECTS AND THREE FRIT BEADS. ACTUAL SIZE (EXCEPT c 1585, SHOWN 1:5)



FIG. 102.—WOODEN OBJECTS. ACTUAL SIZE

grayish buff ware, is entirely problematical. No. c 2752 may be part of an oddly shaped rectangular vessel or container (cf. e 1661 and e 2132 in Fig. 65). Nos. c 482-83 (Fig. 85), described as figurines, may be brush handles (cf. p. 81, n. 19).

Pottery figurines and seals are described on pages 78-82. A globular pottery head on a bone splinter (c 1709) is mentioned on page 87.

FRIT OBJECTS

A few small, light bluish green frit beads were found: Nos. c 394, c 480, and c 511 (Fig. 101), c 1518, and e 1985. They are straight-edged disks with perforations approximately in the middle.

WOODEN OBJECTS

From Level 14 down remains of wood appeared frequently. Most of it was very fragmentary, and often it was difficult to differentiate worked from unworked pieces. Nevertheless, several pieces (Fig. 102) which clearly showed human handiwork and which could be preserved were found in 1930 and 1932. No. c 2400 is a long object whittled to a point at one end; the other end is flattened. This object was found broken into four pieces. Nos. e 1975-77 are fragments of points, and No. c 2350 is a fragment of a handle. The use of Nos. c 1931, c 2281, and c 2349 is problematical. No. c 1931 is oval in cross-section. No. e 1978 may be a natural twig.²³

LIST OF OBJECTS FROM THE CHALCOLITHIC LAYERS, 1927-32²⁴

SEASON OF 1927: PLOT CC 13

- 1876 sherd with incised ornamentation Fig. 66 2s

SEASON OF 1929: PLOT R 6

- b 745:15 sherd with incised ornamentation Fig. 66 31

SEASON OF 1930: PLOTS L 14-15

Level 12 (18.00-19.60 m.)

c 241	chalcedony blade	cf. c 264
c 242	polishing stone	cf. c 2493
c 243	fragment of copper earring	
c 244	clay loom weight	cf. e 2103
c 245-46	bone joint awls	cf. Fig. 193
c 247	conical pottery object	cf. c 271
c 248	pedestal fragment of a "fruit stand"	Fig. 77 6
c 261-62	bone joint awls	cf. Fig. 193
c 263	chalcedony blade	cf. c 1515
c 264	chalcedony blade	Fig. 88
c 265	obsidian arrowhead	Fig. 89
c 266-67	fragmentary hammer axes	Fig. 90
c 268	miniature pottery vessel	Fig. 97
c 269-70	pottery "whorls"	Fig. 98
c 271	conical pottery object	Fig. 101

²³ See also *OIP* XXX 329-32.

²⁴ Metates, simple hammerstones, knucklebones, and very fragmentary objects (with the exception of metal) have been catalogued not individually but in groups and are therefore omitted here. For the registration of sherds see Fig. 32.

c 287	bone splinter awl	Fig. 93
c 288	fragmentary animal figurine of pottery	Fig. 86
c 289	copper blade	Fig. 96
c 290	pottery horn of an animal figurine?	Fig. 85
c 291	pottery "whorl"	Fig. 98
c 292-93	obsidian blades	Fig. 89
c 294	chaledony blades	cf. c 264
c 346	stone "whorl"	Fig. 91
c 392	pottery "whorl"	cf. c 484
c 393	fragmentary macehead	Fig. 90
c 394	frit bead	Fig. 101
c 395	knucklebone	
c 396	piece of hematite	
c 419	fragmentary copper blade	Fig. 96
c 420	perforated stone disk	Fig. 91
c 421	miniature pottery vessel	Fig. 97
c 422-23	flat bone awls	cf. c 1940
c 480	frit bead	Fig. 101
c 481	pottery stamp seal	Fig. 87
c 482-83	pottery idols	Fig. 85
c 484	pottery "whorl"	Fig. 98
c 485	pottery "whorl"	cf. c 270
c 506	head of a human figurine of pottery	Fig. 85
c 507	pottery "whorl"	Fig. 98
c 508	fragmentary copper point	
c 509-10	fragmentary copper pins	
c 511	frit bead	Fig. 101
c 519	miniature pottery vessel	cf. c 1611
c 520	pottery "whorl"	Fig. 98
c 521	obsidian blade	Fig. 89
c 522	copper pin	Fig. 96
c 523	twisted copper wire	
c 551	pottery idol	Fig. 85
c 552	fragmentary copper point	
c 553	antler tip	
c 554	pottery "cake"	Fig. 95
c 555	fragmentary bone object	Fig. 100
c 556	pottery "whorl"	Fig. 94
c 557	pottery "whorl"	Fig. 98
c 558	pottery "whorl"	cf. c 507
c 576	lead stamp seal	cf. c 1510
c 577	fragmentary goblet	Fig. 87
c 578	clay loom weights	Fig. 70 and Pl. VII
c 579	pottery "whorl"	cf. c 2103
c 580-81	pottery "whorls"	cf. c 507
c 582	pottery "whorl"	Fig. 98
c 583	chaledony blade	cf. c 270
c 584	flat bone awl	cf. c 1937
c 598	human figurine of pottery	cf. c 1940
c 599	pottery "whorl"	Fig. 85
c 1689	fragmentary jar	Fig. 98
c 2746-47	fragmentary cups	Fig. 72
c 2748	fragmentary bowl	Fig. 70 and Pl. VII
c 2749-50	fragmentary bowls	Pl. VII
c 2751	fragmentary bowl	Fig. 69 and Pl. VII
c 2752	pottery object	Pl. VII
		Fig. 101

Level 13 (19.60-21.20 m.)

c 1480	incised pottery "whorl," intrusive from Copper Age?	Fig. 200
c 1481	copper stamp seal	Fig. 87
c 1482	copper pin	Fig. 96
c 1483	bone joint awl	cf. Fig. 193
c 1484	bone point	Fig. 94
c 1509	pedestal fragment of a "fruit stand"	Fig. 76 6 and Pl. VII
c 1510	pottery "whorl"	Fig. 98
c 1511	pottery "whorl"	cf. c 2304
c 1512	flat bone awl	cf. c 1940
c 1513	flat bone awl	Fig. 92
c 1514	flat bone awl	cf. c 1940
c 1515	chaledony blade	Fig. 88
c 1516	chaledony blade	cf. c 1937
c 1517	chaledony blade	cf. c 264
c 1518	frit bead	cf. c 511
c 1585	trifoliate pottery object	Fig. 101
c 1586	miniature pottery vessel	Fig. 97
c 1587	pottery handle	Fig. 101
c 1588	stone knob	Fig. 91
c 1589	obsidian flake	cf. e 1991
c 1590	polishing stone	cf. e 1936
c 1591	polishing stone	cf. e 2493
c 1592-95	flat bone awls	cf. e 1940
c 1596	bone splinter awl	cf. e 2312
c 1611-12	miniature pottery vessels	Fig. 97
c 1613	pottery "whorl"	Fig. 98
c 1614	chaledony blade	cf. c 264
c 1615	bone splinter awl	cf. e 2280
c 1616	fragmentary bone pin	cf. c 1838
c 1660-61	clay loom weights	cf. e 2103
c 1662	polishing stone	Fig. 91
c 1663	obsidian blade	Fig. 89
c 1664	drill core	Fig. 91
c 1665	stone pendant or polishing stone	Fig. 91
c 1706	pedestal fragment of a "fruit stand"	cf. e 248
c 1707-8	pottery objects	Fig. 101
c 1709	bone pin with pottery head	Fig. 94
c 1710	bone needle	Fig. 94
c 1711	obsidian blade	Fig. 89
c 1712	chaledony blade	cf. c 264
c 1885	animal figurine of pottery	Fig. 86
c 1886	copper object	Fig. 96
c 1887	fragmentary copper point	
c 2460	staghorn section	Fig. 95
c 2461	perforated bone	Fig. 94
c 2462	perforated bone disk	Fig. 94
c 2463	copper pin	Fig. 96
c 2464	fragmentary copper point	
c 2465	fragmentary copper pin?	

Level 14 (21.20-23.50 m.)

c 1734	cup-base of a large vessel	Fig. 84 20
c 1735	fragmentary cup	Fig. 70 and Pl. VII
c 1736	miniature pottery vessel	Fig. 97
c 1737	staghorn object	Fig. 95

c 1738	flat bone awl	Fig. 92
c 1739	flat bone awl	cf. c 1940
c 1831	reworked potsherd	Fig. 100
c 1832	polishing stone	cf. c 1662
c 1833	polishing stone or whetstone	Fig. 91
c 1834	polishing stone	cf. c 1936
c 1835	stone pendant	Fig. 91
c 1836	piece of ruddle	Fig. 91
c 1837	bone pin or needle	Fig. 94
c 1838	bone pin	Fig. 94
c 1930	fragmentary lead object	Fig. 102
c 1931	wooden object	cf. c 1836
c 1932	piece of ruddle	Fig. 91
c 1933-34	polishing stones or whetstones	cf. c 1830
c 1935	whetstone	Fig. 91
c 1936	polishing stone	Fig. 88
c 1937-38	chalcedony blades	cf. c 1940
c 1939	flat bone awl	Fig. 92
c 1940-41	flat bone awls	cf. c 1940
c 1942	flat bone awl	Fig. 92
c 1943	flat bone awl	cf. c 1940
c 1944-46	flat bone awls	Fig. 92

Level 15 (23.50-24.80 m.)

c 2019	pedestal fragment of a "fruit stand"	Fig. 75 and Pl. VII
c 2181	obsidian flake	Fig. 89
c 2182-83	polishing stones	cf. c 2493
c 2184-85	flat bone awls	cf. c 1940
c 2223	fragmentary cup	Fig. 67 13
c 2224	obsidian blade	Fig. 89
c 2225-28	chalcedony blades	cf. c 264
c 2229-33	flat bone awls	cf. c 1940
c 2234	bone splinter awl	cf. c 2447
c 2235	flat bone awl	cf. c 1940
c 2265	hammerstone?	cf. c 2131
c 2266	drill core	Fig. 91
c 2267-71	chalcedony blades	Fig. 88
c 2272	chalcedony blade	cf. c 264
c 2273-75	flat bone awls	cf. c 1940
c 2276	flat bone awl	Fig. 92
c 2277	bone splinter awl	cf. c 287
c 2278	flat bone awl	cf. c 1940
c 2279	bone splinter awl	cf. c 2280
c 2280	bone splinter awl	Fig. 93
c 2281	wooden object	Fig. 102
c 2303	animal figurine of pottery	Fig. 86
c 2304	pottery "whorl"	Fig. 98
c 2305-6	femur heads	cf. c 2095
c 2307	flat bone awl	cf. c 1940
c 2308	flat bone awl	Fig. 92
c 2309	bone splinter awl	cf. c 287
c 2310	flat bone awl	cf. c 1940
c 2311	bone splinter awl	cf. c 2399
c 2312	bone splinter awl	Fig. 93
c 2313-14	flat bone awls	cf. c 1940
c 2340	miniature pottery vessel	Fig. 97

THE ALISHAR HÜYÜK, 1930-32

c 2341	pottery "whorl"	Fig. 98
c 2342-43	chalcedony blades	cf. c 264
c 2344	stone bead	Fig. 91
c 2345-46	bone splinter awls	Fig. 93
c 2347	bone tube	cf. e 1832
c 2348	antler tip, burned	Fig. 95
c 2349-50	wooden objects	Fig. 102
c 2389	animal figurine of pottery	Fig. 86
c 2390	miniature pottery vessel	Fig. 97
c 2391	small pottery lid	Fig. 97
c 2392	pottery "whorl"	cf. c 520
c 2393	incised pottery object	Fig. 100
c 2394	reworked potsherd	Fig. 100
c 2395	polishing stone	Fig. 91
c 2396	piece of ruddle	cf. c 1836
c 2397	antler tip	cf. c 2348
c 2398	bone splinter awl	cf. c 2346
c 2399	bone splinter awl	Fig. 93
c 2400	wooden object	Fig. 102
c 2441-42	stone objects	cf. c 2493
c 2443	stone object	cf. e 1830
c 2444	flat bone awl	Fig. 92
c 2445	bone splinter awl	Fig. 93
c 2446	bone splinter awl	cf. c 2445
c 2447	bone splinter awl	Fig. 93
c 2448	flat bone awl	cf. c 1940
c 2449	flat bone awl	Fig. 92
c 2450-51	flat bone awls	cf. c 1940
c 2452	flat bone awl	Fig. 92
c 2453-54	flat bone awls	cf. c 1940
c 2455	bone pin	Fig. 94

Level 16 (24.80-25.60 m.)

c 2491-92	animal figurines of pottery	Fig. 86
c 2493	polishing stone	Fig. 91
c 2494	bone pin or needle	cf. e 1943
c 2495	staghorn object	Fig. 95
c 2496	bone splinter awl	Fig. 93
c 2497	bone splinter awl	ef. c 2312
c 2498-99	flat bone awls	cf. c 1940
c 2534	pottery pendant	Fig. 100
c 2535	polishing stone	ef. c 1662
c 2536	bone splinter awl	cf. c 2312
c 2537	flat bone awl	cf. c 1940
c 2538	flat bone awl	Fig. 92
c 2580	staghorn object	Fig. 95
c 2622	flat bone awl	Fig. 92
c 2688-89	fragmentary maceheads	Fig. 90
c 2690	polishing stone	cf. c 1665

SEASON OF 1932: PLOTS L 14-16

Level 12 (18.00-19.60 m.)

e 1328	fragmentary hammer ax	Fig. 90
e 1329	fragmentary macehead	cf. c 393
e 1330	obsidian flake	cf. c 2181
e 1331	chalcedony blade	cf. c 264

e 1332	bone joint awl	cf. Fig. 193
e 1333	fragmentary pottery object	
e 1391	miniature pottery vessel	Fig. 97
e 1392	pottery "whorl"	cf. c 556
e 1393	pottery "whorl"	cf. c 1510
e 1394	bone joint awl	cf. Fig. 193
e 1395	obsidian flake	cf. c 2181
e 1424	pottery "whorl"	cf. c 556
e 1425	pottery "whorl"	cf. c 291
e 1426-27	obsidian flakes	cf. c 2181
e 1465	polishing stone	cf. c 2493
e 1466-69	flat bone awls	cf. c 1940
e 1470-71	obsidian flakes	cf. c 2181
e 1472	copper object	Fig. 96
e 1495-97	bone joint awls	cf. Fig. 193
e 1498-1500	flat bone awls	cf. c 1940
e 1501-2	incised pottery "whorls," intrusive from Copper Age?	cf. c 956, Fig. 199
e 1503	copper point	Fig. 96
e 1525-26	bone joint awls	cf. Fig. 193
e 1527	chalcedony blade	cf. e 2064
e 1528	chalcedony blade	cf. e 1989
e 1529	pottery "whorl"	cf. c 270
e 1530	incised fine-ware sherd, fluted interior	Fig. 67 10
e 1531	corrugated sherd	Fig. 67 11
e 1549	flat bone awl	cf. c 1940
e 1550-51	bone joint awls	cf. Fig. 193
e 1552	pottery "whorl"	cf. c 581
e 1553	pottery "whorl"	cf. c 270
e 1554	fragmentary copper object	
e 1570	animal figurine of pottery	cf. e 2492
e 1571	fragmentary hammer ax	Fig. 90
e 1572-73	chalcedony blades	cf. c 264
e 1574-75	perforated potsherds	
e 1576-79	bone joint awls	cf. Fig. 193
e 1580	copper earrings	
e 1600	stone pendant	Fig. 91
e 1601	pottery "whorl"	cf. c 556
e 1602-8	bone splinter awls	cf. c 2312
e 1609	flat bone awl	cf. c 1940
e 1615	pedestal fragment of a "fruit stand"	Fig. 77 1
e 1616-17	pedestal fragments of "fruit stands"	Fig. 75 and Pl. VII
e 1618	pedestal fragment of a "fruit stand"	Fig. 76 3 and Pl. VII
e 1619	fragmentary cup	Fig. 73 and Pl. VII
e 1620	jar	Fig. 72 and Pl. VII
e 1654-55	chalcedony blades	cf. c 264
e 1656	chalcedony blade	cf. e 1989
e 1657	obsidian arrowhead	cf. c 265
e 1658	pottery "whorl"	cf. c 291
e 1659-60	flat bone awls	cf. c 1940
e 1661	incised sherd of a rectangular vessel	Fig. 65 9
e 1662	pottery spout	
e 1708	jar	Fig. 72 and Pl. VII
e 1709	pitcher or jar	Fig. 73 and Pl. VII
e 1870-71	large vessels	Fig. 74 and Pl. VII
e 1872	jar	Fig. 71 and Pl. VII
e 2102	fragmentary jar	Fig. 71 and Pl. VII

e 2108	cup	Fig. 69 and Pl. VII
e 2297	fragment of a large vessel	Fig. 80
e 2298	large storage vessel	Fig. 78 and Pl. VII
e 2324	pedestal fragment of a "fruit stand"	Fig. 77 4
Level 13 (19.60-21.20 m.)		
e 1687	obsidian core or scraper	cf. e 1903
e 1688	obsidian blade	cf. e 2096
e 1689	chalcedony blade	cf. e 264
e 1690	chalcedony core or scraper	cf. e 1741
e 1691	obsidian blade	cf. e 2096
e 1692	boar's tusk	
e 1693	shell	
e 1694	pottery spout	cf. c 484
e 1695	pottery "whorl"	cf. c 507
e 1696	pottery "whorl"	cf. c 1936
e 1697	polishing stone	
e 1698	copper fragments	
e 1704	cup of a "fruit stand"	Fig. 75
e 1705-6	cups of "fruit stands"	Fig. 75 and Pl. VII
e 1707	rim of a large vessel	Fig. 82 71
e 1732	fragmentary pottery andiron (intrusive?)	Fig. 100
e 1733	pottery "cake"	Fig. 100
e 1734	pottery "whorl"	cf. c 580
e 1735	reworked pottery spout	Fig. 100
e 1736	bone joint awl	cf. Fig. 193
e 1737	chalcedony blade	cf. e 2034
e 1738	obsidian flake	cf. e 1991
e 1739	fragmentary hammer ax	Fig. 90
e 1740	chalcedony blade	cf. e 1905
e 1741	chalcedony core or scraper	Fig. 88
e 1742	pottery horn of an animal figurine?	Fig. 85
e 1743	fragmentary animal figurine of pottery	cf. e 2492
e 1744	pottery hoof of an animal figurine	Fig. 85
e 1763	animal bone	
e 1764	bone point	
e 1765	obsidian arrowhead	Fig. 89
e 1766-68	obsidian cores or scrapers	cf. e 1903
e 1769-70	obsidian blades	Fig. 89
e 1771	chalcedony blade	cf. c 264
e 1772	chalcedony blade	cf. c 1937
e 1773	chalcedony blade	cf. c 2268
e 1774	stone bead	cf. e 1775
e 1775	stone bead	Fig. 91
e 1776	pottery "whorl"	cf. c 1510
e 1777	pottery "whorl"	cf. c 556
e 1794	clay loom weight	cf. e 2103
e 1795	staghorn section	Fig. 95
e 1796-97	bone joint awls	cf. Fig. 193
e 1798	fragmentary stone object	Fig. 88
e 1799	chalcedony blade	cf. c 1515
e 1800	chalcedony blade	Fig. 96
e 1801	copper fragment	Fig. 100
e 1824	pottery bead	Fig. 90
e 1825	fragmentary hammer ax	cf. e 2096
e 1826	obsidian blade	

e 1827	obsidian core or scraper	cf. e 1903
e 1828	chalcedony scraper	cf. e 1741
e 1829	chalcedony blade	cf. e 1905
e 1830	polishing stone or whetstone	Fig. 91
e 1831	flat bone awl	cf. c 1940
e 1832	bone tube	Fig. 94
e 1833	sherd with notched handle	Fig. 84 2
e 1834	clay loom weight	cf. e 2103
e 1873	jar	Fig. 72 and Pl. VII
e 1874-75	cups of "fruit stands"	Fig. 75
e 1876	fragmentary vessel	Fig. 73 and Pl. VII
e 1877	fragmentary cup	Fig. 70 and Pl. VII
e 1878	fragmentary small jar	Fig. 73 and Pl. VII
e 1879	cup of a "fruit stand"	Fig. 75 and Pl. VII
e 1900	polishing stone	cf. c 2395
e 1901	piece of hematite	cf. c 2395
e 1902	polishing stone	Fig. 89
e 1903	obsidian core or scraper	Fig. 89
e 1904	obsidian blade	Fig. 88
e 1905	chalcedony blade	cf. c 1940
e 1906	flat bone awl	cf. c 2312
e 1907	bone splinter awl	cf. c 580
e 1908	pottery "whorl"	Fig. 87
e 1909	stone stamp seal	cf. c 2312
e 1921	bone splinter awl	cf. c 1940
e 1922	flat bone awl	Fig. 88
e 1923	chalcedony blade	cf. c 1662
e 1924	polishing stone	
e 1925	piece of hematite	
e 2038	pair of copper bracelets	Fig. 52
e 2103a-e	clay loom weights	Fig. 99
e 2104a-e	clay loom weights	Fig. 99
e 2105a-d	clay loom weights	Fig. 99

Level 14 (21.20-23.50 m.)

e 1940	head of a human figurine of pottery	Fig. 85
e 1941-42	flat bone awls	cf. c 1940
e 1943-44	bone pins or needles	Fig. 94
e 1945	perforated humerus head	Fig. 94
e 1946-47	chalcedony blades	cf. c 1515
e 1948	chalcedony blade	Fig. 88
e 1949-50	chalcedony blades	cf. c 1515
e 1951-52	chalcedony blades	cf. e 2064
e 1953	obsidian point	Fig. 89
e 1954	obsidian blade	Fig. 89
e 1955	obsidian flake	cf. e 1956
e 1956	obsidian flake	Fig. 89
e 1994	hammerstone?	cf. e 2131
e 2025	head and neck of an animal figurine of pottery	Fig. 85
e 2026	stone idol	Fig. 85
e 2027	pottery "whorl"	cf. c 2304
e 2028-30	flat bone awls	cf. e 1940
e 2031	chalcedony blade	cf. e 1988
e 2032	chalcedony blade	cf. e 1905
e 2033	chalcedony blade	cf. e 2021
e 2034	chalcedony blade	Fig. 88

e 2035	obsidian core or scraper	Fig. 89
e 2036	polishing stone	cf. e 2493
e 2037	copper fragment	
e 2059	bone splinter awl	cf. e 2312
e 2060-61	flat bone awls	cf. e 1940
e 2062	stone object	cf. e 1515
e 2063	chalcedony blade	Fig. 88
e 2064-65	chalcedony blades	cf. e 264
e 2066	chalcedony blade	Fig. 88
e 2067-68	chalcedony blades	cf. e 264
e 2069	chalcedony blade	Fig. 94
e 2095	femur head	Fig. 89
e 2096	obsidian blade	cf. e 1515
e 2097	chalcedony blade	cf. e 1989
e 2098	chalcedony blade	
e 2099	chalcedony blade	
e 2100	fragmentary cup	Fig. 70 and Pl. VII
e 2101	pedestal fragment of a "fruit stand"	Fig. 76 7 and Pl. VII
e 2110	fragmentary storage vessel	Fig. 78 and Pl. VII
e 2120	chalcedony blade	cf. e 2270
e 2121	chalcedony blade	Fig. 88
e 2122	chalcedony blade	cf. e 1937
e 2123	chalcedony blade	cf. e 1799
e 2124	chalcedony blade	cf. e 2270
e 2131	hammerstone?	Fig. 90
e 2236-37	copper bracelets	Fig. 43
e 2238-39	silver earrings	Fig. 43
e 2240	chalcedony blade	Fig. 43
e 2241	fragmentary macehead	Figs. 43 and 90
e 2296	large storage vessel	Fig. 79 and Pl. VII
e 2322	pedestal fragment of a "fruit stand"	Fig. 76 1

Level 15 (23.50-24.80 m.)

e 2142	flat bone awl	cf. e 1940
e 2153	flat bone awl	cf. e 1940
e 2154	chalcedony blade	cf. e 2022
e 2160	miniature pottery vessel	cf. e 1736
e 2161	chalcedony blade	cf. e 1937
e 2162	chalcedony blade	cf. e 2270
e 2172	chalcedony blade	cf. e 2034
e 2187	chalcedony blade	cf. e 2064

Level 16 (24.80-25.60 m.)

e 2106	fragmentary cup-base of a vessel	Fig. 84 23
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Level 17 (25.60-27.00 m.)

e 1974	impression of a stamp seal	Fig. 87
e 1975-78	wooden objects	Fig. 102
e 1979	bone splinter awl	cf. e 2445
e 1980-81	flat bone awls	cf. e 1940
e 1982-83	bone splinter awls	cf. e 2312
e 1984	flat bone awl	cf. e 1940
e 1985	frit bead	cf. e 511
e 1986	chalcedony blade	cf. e 2022
e 1987	chalcedony blade	
e 1988-90	chalcedony blades	Fig. 88

e 1991	pointed flake of obsidian	Fig. 89
e 1992	fragmentary staghorn ax	Fig. 94
e 1918	miniature pottery vessel	cf. e 2390
e 2019	piece of ruddle	cf. e 1836
e 2020	stone bead	cf. e 1775
e 2021-23	chalcedony blades	Fig. 88
e 2024	obsidian flake	cf. e 2181
e 2053	staghorn object	Fig. 95
e 2054	flat bone awl	cf. e 1940
e 2055	reworked potsherd	cf. e 1831
e 2056	chalcedony blade	cf. e 2270
e 2057	polishing stone	cf. e 2395
e 2058	copper fragments	
e 2109	fragmentary vessel	cf. e 1876
e 2132	sherd of a rectangular vessel	Fig. 65 13
e 2133	chalcedony blade	cf. e 1515
e 2134-35	shells	

Level 18 (27.00-27.80 m.)

e 2091	reworked potsherd	cf. e 1831
e 2092	obsidian blade	Fig. 89
e 2093	chalcedony blade	cf. e 1515
e 2094	chalcedony blade	cf. e 2270
e 2107	bowl	Fig. 69 and Pl. VII
e 2117	chalcedony blade	cf. e 2270
e 2118	bone splinter awl	cf. e 2312
e 2119	wooden object	cf. e 1977
e 2127	polishing stone	cf. e 2493
e 2128	chalcedony core or scraper	Fig. 88
e 2129	obsidian blade	Fig. 89
e 2130	obsidian blade	cf. e 1770

Level 19 (27.80-29.00 m.)

e 2140	obsidian point	cf. e 1953
e 2141	chalcedony blade	cf. e 1937
e 2150	flat bone awl	cf. e 1940
e 2151	chalcedony blade	cf. e 2022
e 2152	chalcedony blade	cf. e 1515

III

THE COPPER AGE

In the second cultural period so far known at the Alişar mound the fully developed Copper Age appears. Copper was used extensively for small blades, points that were probably arrowheads, bracelets and earrings, and pins in great number and variety. Bronze probably starts to appear toward the end of this period.¹ Further evidence of a new cultural period is presented by the pottery. The typical pottery is now a handmade, red-slipped ware. The forms, generally primitive, no longer show much variation. Though some red ware was made already in the Chalcolithic period (Fig. 32), that ware was generally grit-tempered, in contrast with the Copper Age ware, which was almost without exception plant-tempered.

Until 1930 this was the oldest culture that we had struck. During the first part of this period the citadel mound only was inhabited, whereas during its last three or even four phases the settlement spread out over what we now call the "city terrace." It was the first period during which the whole site—both citadel mound and city terrace—was occupied; the site of Alişar had become a city (Fig. 103). Wherever we dug to the bottom of the cultural deposits of the Copper Age on the terrace, we found them superimposed on virgin soil consisting of clayey earth with lime and gypsum veins (in W-Y 14-15, J 22, L 29, Z 15, AA 12, BB 14). The expansion probably followed the lowering of the water level when the surrounding swamp or lake became a dry plain and the water receded into the depression west of the mound. There many small springs create even now a swampy pasture through which the Alişar Özü flows along the western boundary of the site.

In the excavation of L 14-16 on the citadel mound we found five main building levels of the Copper Age (7-11 M), the lowest of which had three sublevels (11a-c M).² Level 11 yielded few architectural remains, but showed signs of violent destruction. We cannot say positively that these early settlements were fortified, but in Level 10 and later layers there seems to be evidence of fortification of the mound. On the north side of the citadel, in O 10-11, where we excavated to the depth of Level 10, we found remains of strong fortification walls. On the southern slope of the mound, in L 14-16, we could not actually distinguish the remains of a fortification wall, but the horizontal nature of the cultural deposits there permits the assumption of one.

On the city terrace wherever we pierced the cultural deposits of the Hittite period we struck remains of the Copper Age, proving without any doubt that a Copper Age settlement once covered the complete area of the city terrace.³ The remains of a strong outer defense wall uncovered in Q 32-33, Z 29-CC 25, and II 17 show that this settlement was fortified. That the two main building periods of the Copper Age which can be distinguished on the city terrace, Levels 13-14 T, must have been of long duration is indicated not only by the great thickness of their deposits, but also by the existence of several floor levels within the preserved building inclosures. It is, therefore, quite possible that the two main building levels of the city

¹ Cf. *OIP* XXX 338 f.

² Cf. p. 30, n. 6.

³ Although in W-Y 14-15, where we dug to virgin soil, no remains of an actual building level were unearthed, typical Copper Age sherds appeared; cf. *OIP* VI 153.



FIG. 103.—PLAN OF THE ALISAR MOUND, SHOWING BUILDING REMAINS OF THE COPPER AGE. AREAS OF LARGE SHERD FINDS ARE STIPPLED. SCALE, 1:2000

terrace were contemporaneous with the last three or even four building levels of this period on the citadel mound. It cannot be determined to which building layer of the citadel mound or the city terrace belongs the small area in F 14 which was excavated in 1929 on the western spur of the citadel mound, but probably it is contemporaneous with one of the last two building layers.

In the latest Copper Age deposits, Levels 7 M and 13 T, we find a strong admixture of a finer handmade painted ware with the typical Copper Age pottery. No new forms or types of small objects appear with this painted pottery, which was contemporaneous with the last phase of the Copper Age and the first phase of the Early Bronze Age. The latter period also seems to have produced no new forms or types of small objects; but the pottery definitely indicates a culture separate from that of the Copper Age although related to it. Hence I prefer to treat the above mentioned painted pottery with the culture of the Early Bronze Age.

In Level 7 M several complete vessels and many fragments which were comparable to a certain type of Troy II ware were found, thus giving an approximate date to the end of the Copper Age culture of Alişar.⁴ On the other hand, there were indications on the city terrace which might be interpreted as meaning that this Copper Age culture continued locally into the beginning of the second millennium B.C. (cf. p. 125). At that time the mound was already settled in its entirety by people using a monochrome wheelmade ware which must now be regarded as approximately contemporaneous with the Hittite Empires.

The deposit of the Copper Age was approximately 8.50 thick on the citadel mound and between 4 and 5 meters thick on the city terrace. Sometime during the last phases of the Copper Age culture bronze made its first appearance in Alişar. On the citadel mound the Copper Age culture was followed by a deep deposit of Early Bronze Age culture. On the city terrace the Copper Age culture was followed by a cultural deposit of the period of the Hittite Empires, with the exception of I-J 25, J 26, and GG-II 9, where a definite Early Bronze Age layer intervened. But Early Bronze Age sherds appeared like a film nearly everywhere between the refuse layer of the last Copper Age building level and the oldest deposit of the Hittite period.

The appearance of stone foundations for walls is an innovation of this period. These foundations vary in height from a single layer of stone to nearly a meter. Mud or earth binding was always used in them. The superstructures consisted of *kerpiç* bricks or of tamped *kerpiç*. The foundations of the fortification walls were exceedingly well built, but no traces of the superstructures remained. The houses seem usually to have been built with walls meeting at right angles; and, as far as one may judge by the evidence (Fig. 103), they were oriented according to a definite plan related to the course of the city outer defense wall. This outer defense wall, we may assume, was roughly oval with its long axis in a northeast-southwest direction.

The pottery vessels were usually small; exceptions are large storage vessels and the jars commonly used for burials. The typical ware is handmade, rather crude, plant-tempered, and red-slipped; in some instances it is carefully burnished. The forms are usually rather simple and, compared to those of the Chalcolithic period, primitive. Other household implements were made of copper or bronze, stone, and bone. Relatively few new forms appear among them. Stamp seals are frequent, and one cylinder seal was found. In the domestic life of the people no great difference can be discerned. The domestic animals included sheep, cattle, pigs, and dogs, and here too charred grain was found. Numerous loom weights and "whorls" show that weaving was known, although no actual fabric remains have been discovered. The frequent appearance of a large pin, sometimes bent, on the shoulder of a skeleton suggests that such pins were used to hold woven garments.

⁴ Cf. *OIP* XXX 419 f.

Burials evidently were often intramural. Bodies were usually deposited in contracted positions in large jars, the orifices of which were covered by large stone slabs. Simple earth burials and stone box burials also appeared; mortuary gifts were rare. There seemed to be no special orientation of the bodies.

SETTLEMENT REMAINS AND BURIALS

In L 14-16 on the citadel mound differentiating the various building periods was almost as difficult for the Copper Age as for the Chalcolithic. Most Copper Age walls, however, had stone foundations and were therefore easier to discern. The remains on the city terrace were usually the better preserved. Some houses, especially in W 24 and T-U 30-31, showed several interior floor layers indicating a long, undisturbed occupancy. With the exception of the Phrygian fortification and the late Roman-Byzantine walls, the Copper Age fortification walls on the citadel in O 11 and on the city terrace in Z 29-CC 25 and II 17 are perhaps the best constructed on the mound. Wherever virgin soil was reached on the city terrace we had first to pierce a cultural deposit of the Copper Age. An interesting feature is a depression just south of the citadel mound, extending from the western limit to the middle of the site. In I-J 22-26, extending nearly across this depression, we found no architectural remains of the Copper Age, but in the deepest cultural deposit we found a great number of potsherds of this period.

Since the Copper Age deposits on the terrace are 5-6 meters below the surface, and our available time was limited, we were unable to free an area large enough to expose a complete building plan. The buildings seem to have consisted of several rooms with walls approximately at right angles. Door sockets were found several times *in situ*. The walls were of sun-dried brick or of tamped *kerpiç* usually built on stone foundations. Frequently whitewash appeared on one or both sides of the walls. A special kind of wall construction appeared in Level 7 M in L 14-15. Floors consisted of tamped earth, usually mixed with small stones or potsherds. Pavements were rare. No traces of roofings were found.

Most burials were found below the floor levels of rooms. With the exception of two mandibles, uncovered in 1929,⁵ no human bones were found in the levels of the Copper Age on the citadel mound (in L 14-16). Pot burials, stone box burials, and simple earth burials appeared on the terrace; no particular orientation seems to have been favored.

STRUCTURES ON THE CITADEL MOUND

The oldest settlement remains of the Copper Age, Level 11 M, were reached in L 14-15 at a depth of 18 meters (cf. frontispiece and Pl. X). This level was the lowest one reached in 1929.⁶ The refuse deposit of the last building level of the Chalcolithic age, Level 12, was directly beneath.

In 1932 we cleared an additional section in L 15-16 (cf. Fig. 31) and were able to differentiate three sublevels of Level 11. In the southern half of L 15 we unearthed four very well built walls (Figs. 104-5), the foundation stones of which were comparatively large. In some places they were only one course high. A door socket, perhaps *in situ*, appeared on the western end of the largest wall, which may have been an outer defense wall.

In Level 10 M, at an approximate depth of 14.70, the additional excavations of 1932 brought to light a number of well set stone foundations built of large boulders (Fig. 106). As in the preceding level, many of the foundations consisted of single courses of stones. An especially large and deep door socket, cracked in the middle, was found in this level, but unfortunately

⁵ OIP XIX 78.

⁶ OIP XIX 33 and 39.

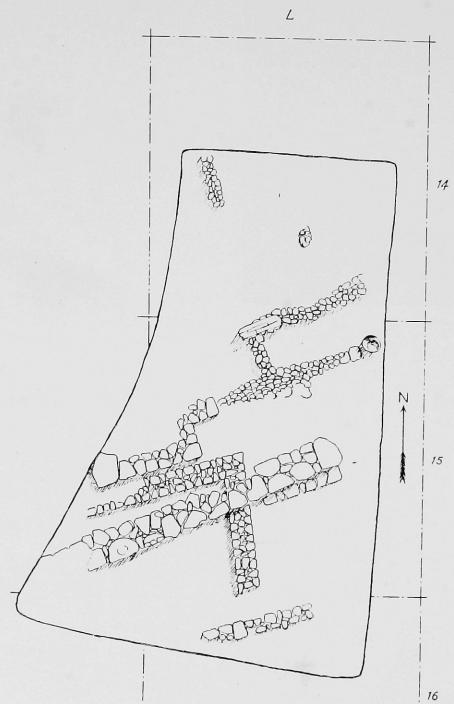


FIG. 104.—PLAN OF LEVEL 11 M IN L14-16. SCALE, 1:200

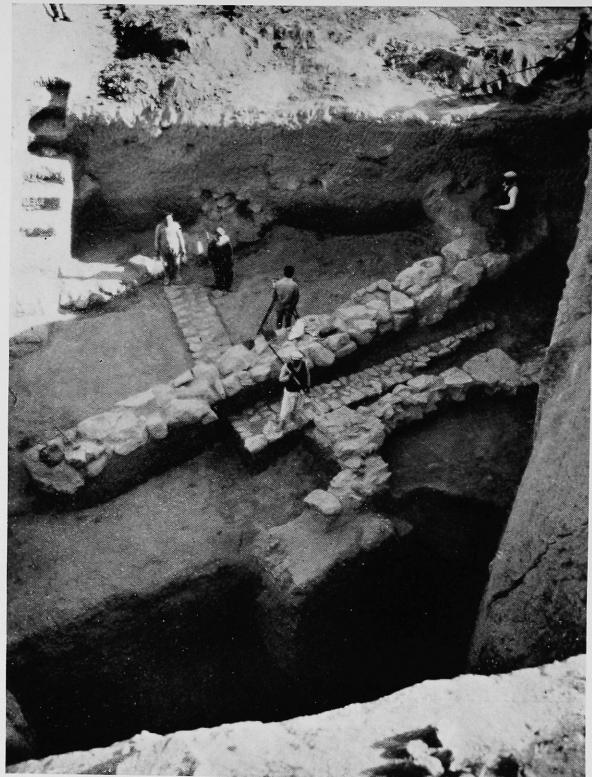


FIG. 105.—THE AREA OF LEVEL 11 M IN L15-16 EXCAVATED IN 1932, SEEN FROM NORTH

not *in situ* (Fig. 107). A cistern unearthed in 1929⁷ also belongs to this level. At the bottom of the cistern a large storage vessel had been built into the floor of Level 11.

In 1932 additional wall fragments were excavated in Level 9 M, at an approximate depth of 13.40 (Figs. 108-9). Here walls of two building periods could be differentiated which showed the same orientation as the walls in the 1929 excavation,⁸ though they were not so well preserved. All the *kerpiç* had disappeared.

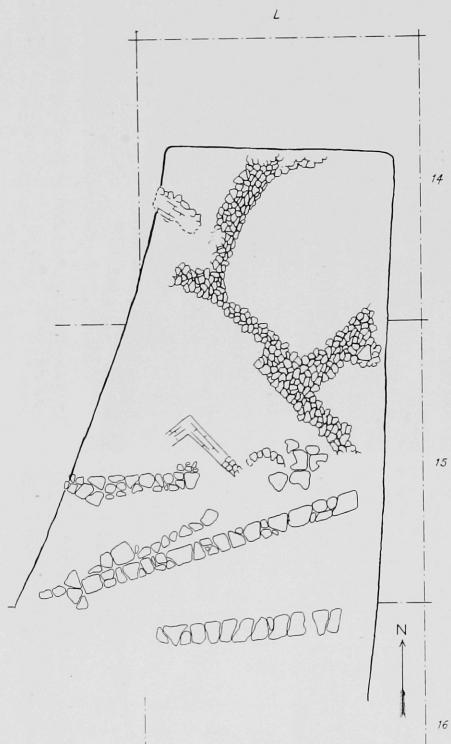


FIG. 106.—PLAN OF LEVEL 10 M IN L 14-16. SCALE, 1:200



FIG. 107.—DOOR SOCKET IN LEVEL 10 M IN L 14-16

Excavations of 1932 in Level 8 M, at a depth of 11.30, revealed part of a room in L 15 (Figs. 110-11). On one section of the floor was a well laid pavement. The orientation of the walls was again roughly the same as that of the walls unearthed in 1929.⁹

In Level 7 M, 9.90 below the original summit of the mound, we found only the southerly continuation of a wall excavated in 1929¹⁰ and the remains of a pavement south of it (Fig. 112). In 1929 an interesting type of wall construction had been found at this level. The foundations were extremely broad up to pavement level. Above that the inner half of the wall was built of *kerpiç*, while the outer half was of stone. The latter, however, may have extended only a short distance above the lower courses to form a protective outer face (Fig. 113).

⁷ OIP XIX 38.

⁸ OIP XIX 35-37.

⁹ OIP XIX 35.

¹⁰ OIP XIX 34-35.



A



B

FIG. 108.—THE EXCAVATED AREA OF LEVEL 9 M IN L 14-16, (A) FROM NORTH AND (B) FROM NORTHWEST

In O 10-11 we cut through the large citadel wall of the Early Bronze Age and through a still older fortification wall beneath it which had all the marks of having been violently destroyed by conflagration. Below this, 12.90 from the top of the mound, we struck the remains of a well built fortification wall of the Copper Age which was superimposed upon another fortification wall of the same period (Figs. 114-15). Both had approximately the same orientation. An



FIG. 109.—PLAN OF LEVEL 9 M IN L14-16. SCALE, 1:200

FIG. 110.—PLAN OF LEVEL 8 M IN L14-16.
SCALE, 1:200

interesting feature was that the inside of each wall was battered, suggesting a retaining wall. One course of large bowlers was preserved on the later wall, perhaps the foundation for a *kerpiç* superstructure. Time did not permit completion of this excavation, and it is difficult to determine to which of the building levels in L 14-16 these two fortifications belonged; but it seems probable that they belonged somewhere between Levels 9 and 11 M. The fortification above the Copper Age walls, described as showing marks of fire, cannot be assigned definitely either to the Early Bronze Age or to the Copper Age, as the destruction deposit had been greatly disturbed. Nevertheless, I prefer to describe it with the remains of the Early Bronze Age.

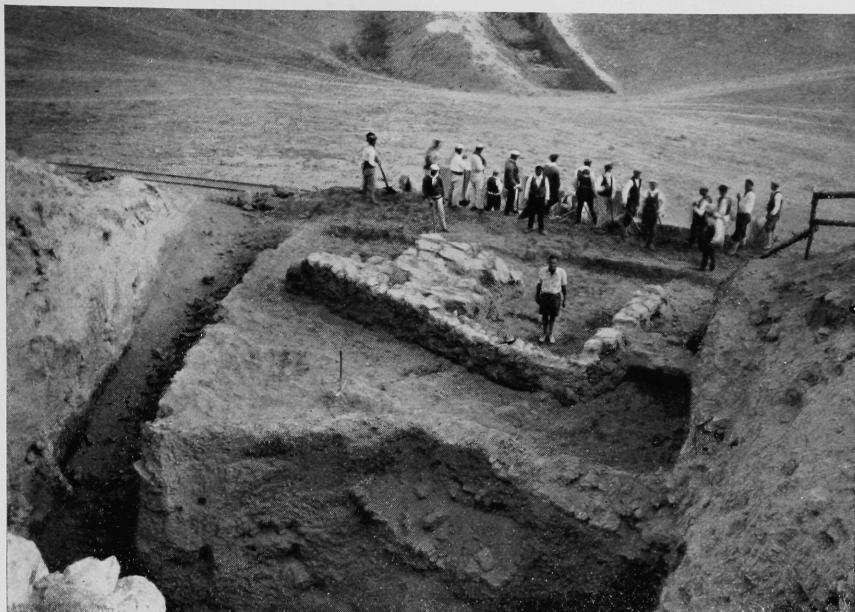


FIG. 111.—LEVEL 8 M IN L 14-16, FROM NORTH

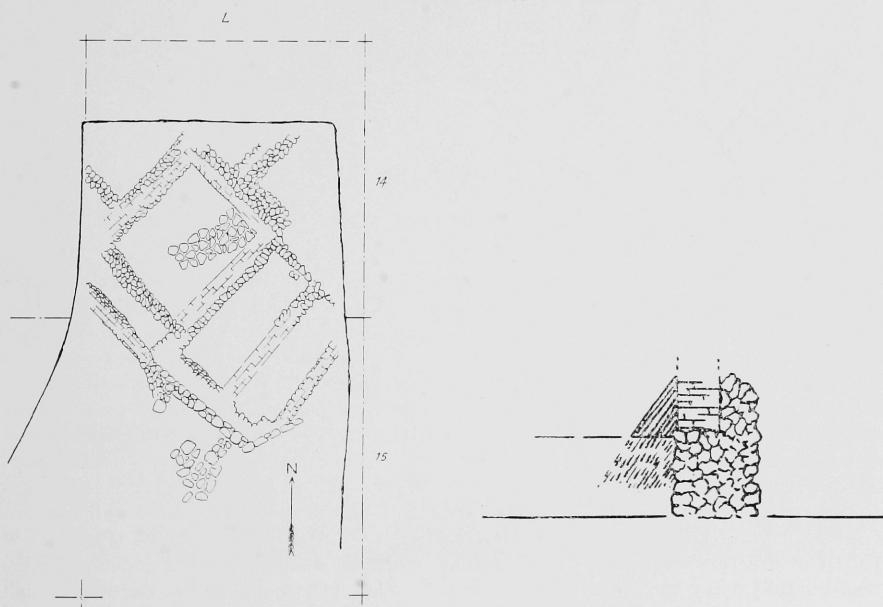


FIG. 112.—PLAN OF LEVEL 7 M IN L 14-15.
SCALE, 1:200

FIG. 113.—TYPE OF WALL CONSTRUCTION FOUND IN
LEVEL 7 M IN L 14-15. FROM *OIP* XIX, FIG. 33

In 1929 on the southwestern spur of the citadel mound a Copper Age deposit was reached in the part of F 14 north of the Phrygian fortification wall (Fig. 116). According to the architectural description in the files of the Oriental Institute, a few *kerpiç* walls, one of which seems to have had a stone shelf, were uncovered at a depth of 7.70 in the northwest corner of the plot. One of these walls abutted against a well set corner of a stone wall 1.50 high. Several refuse pits were uncovered in the northeast part of the plot. "The pits were cut through a hard stratum, some .20 thick, which descended in three terraces to the west. The pits were lined with the same hard soil as that with which the floor was constructed." Sherds found in this level, according to the sherd catalogue of 1929, leave no doubt that this is a level of the Copper Age. It is, of course, impossible to say to what level of the Copper Age on the citadel mound or city terrace these remains correspond.

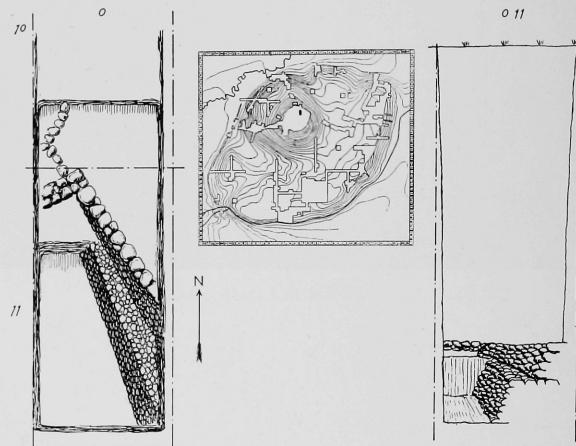


FIG. 114.—PLAN AND CROSS-SECTION OF O 11. SCALE, 1:200

STRUCTURES ON THE TERRACE

FORTIFICATIONS

Near the eastern edge of the city terrace in Z 28-29 we found very well built wall foundations 2 meters wide and 2.50 high (Figs. 117-18; cf. Fig. 134). The stones were rather large and well set, with earth or mud binding. Because of association with the building level farther north in Z 26-28 (cf. p. 129), which was certainly of the Copper Age, there could be no doubt that this was a part of the Copper Age outer defense wall. We traced this wall north to CC 25, where it made a right-angle turn and disappeared beneath the outer defense wall of the Hittite period. In Z 28 and AA 27 approximately 4 meters behind the outer defense wall we found remains which seemed to me to be part of another fortification. This structure consisted of one or two courses of a stone foundation, seemingly of two small towers and a connecting wall. A wall fragment in II 17¹¹ was probably part of the outer defense wall found in Z 29-CC 15. Still another part of this fortification was unearthed in Q 32-33 (Fig. 119).^{11a} The latter structure was partly of large boulders, partly of small stones, and undoubtedly belonged to the Copper Age. In no other plot near the edge of the mound did we dig deep enough

¹¹ Cf. *OIP* XXIX, Figs. 20 and 43 B.

^{11a} Cf. *OIP* XXIX, frontispiece.



FIG. 115.—COPPER AGE FORTIFICATION WALLS IN O 11

to reach Copper Age foundations, but nearly everywhere we found great quantities of typical Copper Age sherds beneath the foundation of the outer defense wall of the Hittite period. It cannot as yet be decided to which building level of the Copper Age (13 or 14 T) the cleared parts of the city wall belong.

OTHER BUILDING REMAINS ON THE TERRACE

We were able to distinguish two main building levels (13-14 T) nearly everywhere in the culture deposits of the Copper Age on the city terrace, and sometimes sublevels could be dis-

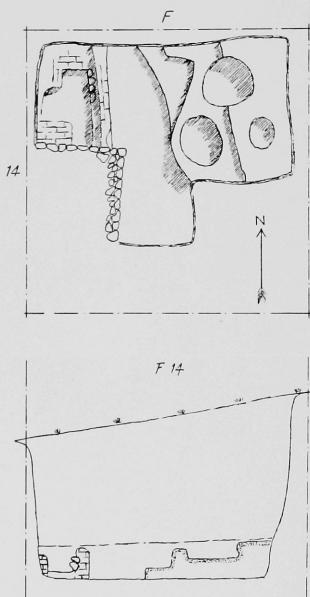


FIG. 116.—PLAN AND CROSS-SECTION OF COPPER AGE REMAINS IN F14. SCALE, 1:200

tinguished. In 1931 we excavated building remains of the Copper Age in U 27, T 29, and S-U 30-31 (Figs. 120-21). Six meters below the surface in U 27 were found a fragmentary wall and an adjoining pavement which probably belonged to Level 13 T. In this same plot were found two skeletons, d X48-49. The former was a pot burial placed just a little deeper than the wall foundation; the other, not in a pot, was level with the top of the pavement. In T 29, at a depth of 6.30, part of a building of Level 13 T was found. A section of tamped earth floor adjoined walls made of *kerpiç*, and a corner formed by the walls was lined with stones. Near these remains we found two pot burials, d X46-47. In S-T 30 there were only a few fragmentary *kerpiç* walls. In U 30 building remains belonging to Level 13 T were at a depth of 5.60. One fragmentary wall was of stone; the others were of *kerpiç* in which it was impossible to find any horizontal or vertical joints. Associated with these walls were three pot burials (d X27, d X29, and d X45) and one earth burial (d X28).

In S-T 31, at a depth of 6.60, we uncovered walls built of small stones forming three sides of a room 7×7 meters (Fig. 122, background). The foundations sloped downward toward the



FIG. 117.—PLAN OF COPPER AGE CITY WALL AND ADJOINING COPPER AGE SETTLEMENT REMAINS IN Z 26-29, AA 27-28, BB 26-27, AND CC 25-26. SCALE, 1:200.

southwest, no doubt because of the surface topography then existing. Buttresses projected inward .45 from the middle of the east and west walls. This room may have been used as a single defense tower or as an integral part of some fortification plan. In T-U 31 we uncovered at a depth of 7 meters portions of two exceedingly well preserved buildings of Level 14 (Fig.



FIG. 118.—COPPER AGE CITY WALL (A-B), WITH HITTITE CITY WALL OF THE THIRD BUILDING PERIOD IN FOREGROUND, SEEN FROM NORTHEAST

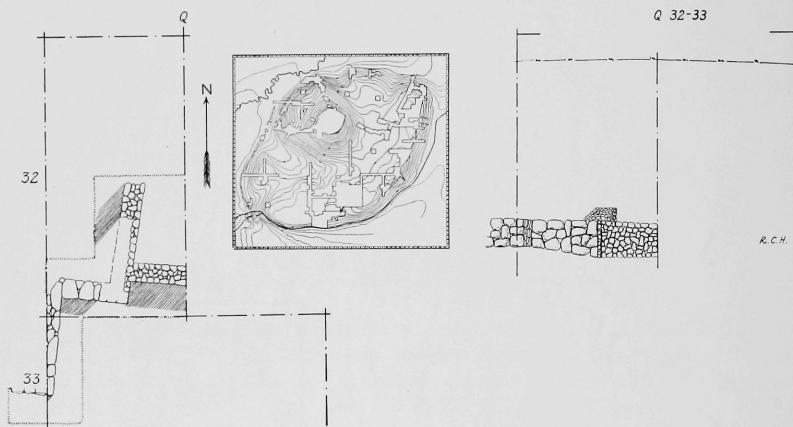


FIG. 119.—PLAN AND CROSS-SECTION OF THE COPPER AGE CITY WALL IN Q 32-33. SCALE, 1:200

122, foreground). The walls, built of tamped *kerpiç*, were about .45 in thickness and in some places were preserved to a height of 1.80; they showed only horizontal joints, the average thickness of a layer being .10. On these walls were traces of whitewash both inside and outside. In a door jamb in T 31 there was a semicircular depression into which a wooden post had apparently been inserted (Fig. 123 A). The same building shows a semicircular protuberance inside the south wall. The second building (in U 31) was used during the building periods of both Levels 13 and 14 T, as is evident from a burned layer and a course of small stones 1.20 above the original foundations (Fig. 123 B); in addition there were several floor deposits.

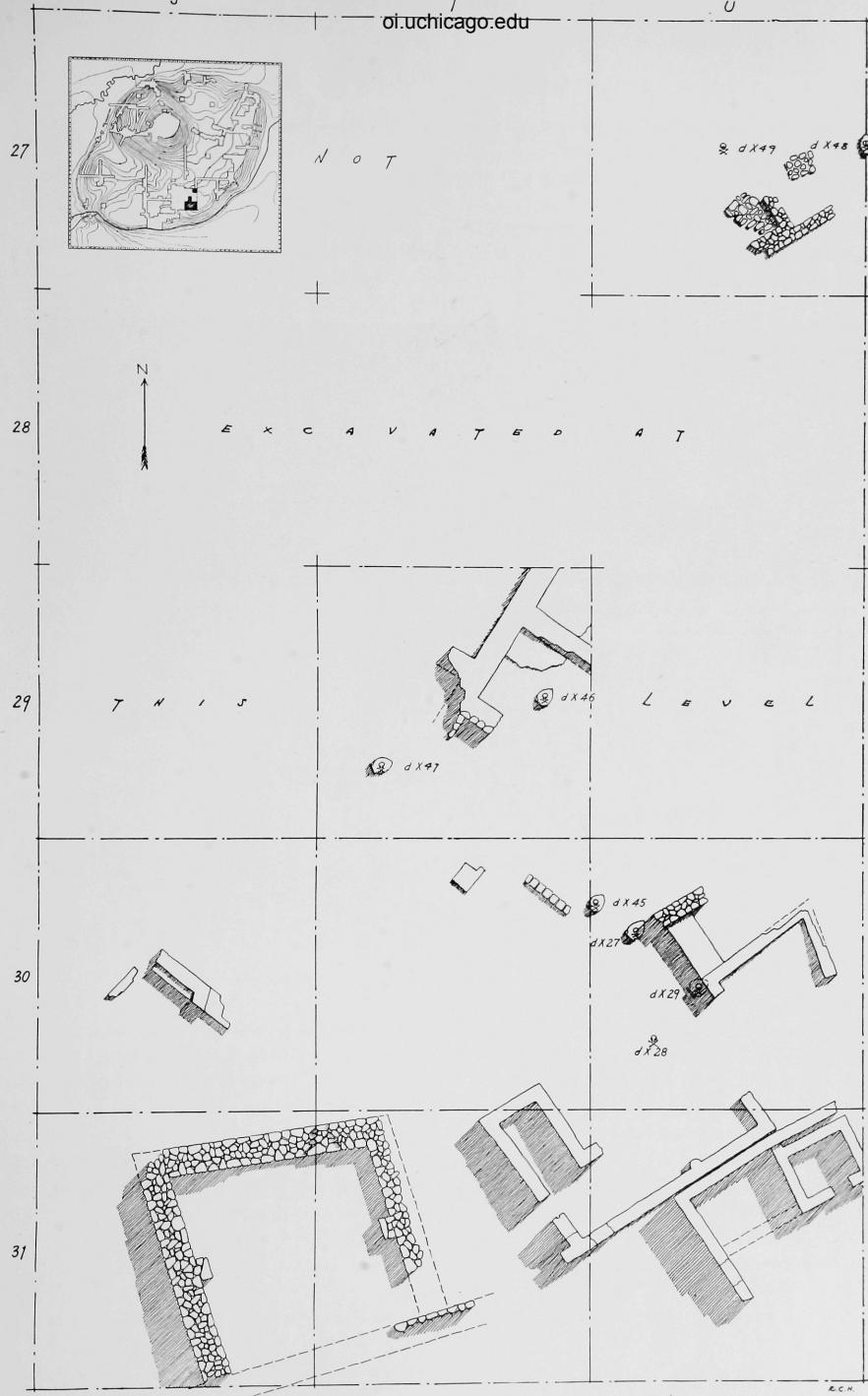


FIG. 120.—PLAN OF THE COPPER AGE REMAINS IN U 27, T 29, AND S—U 30—31. SCALE, 1:200

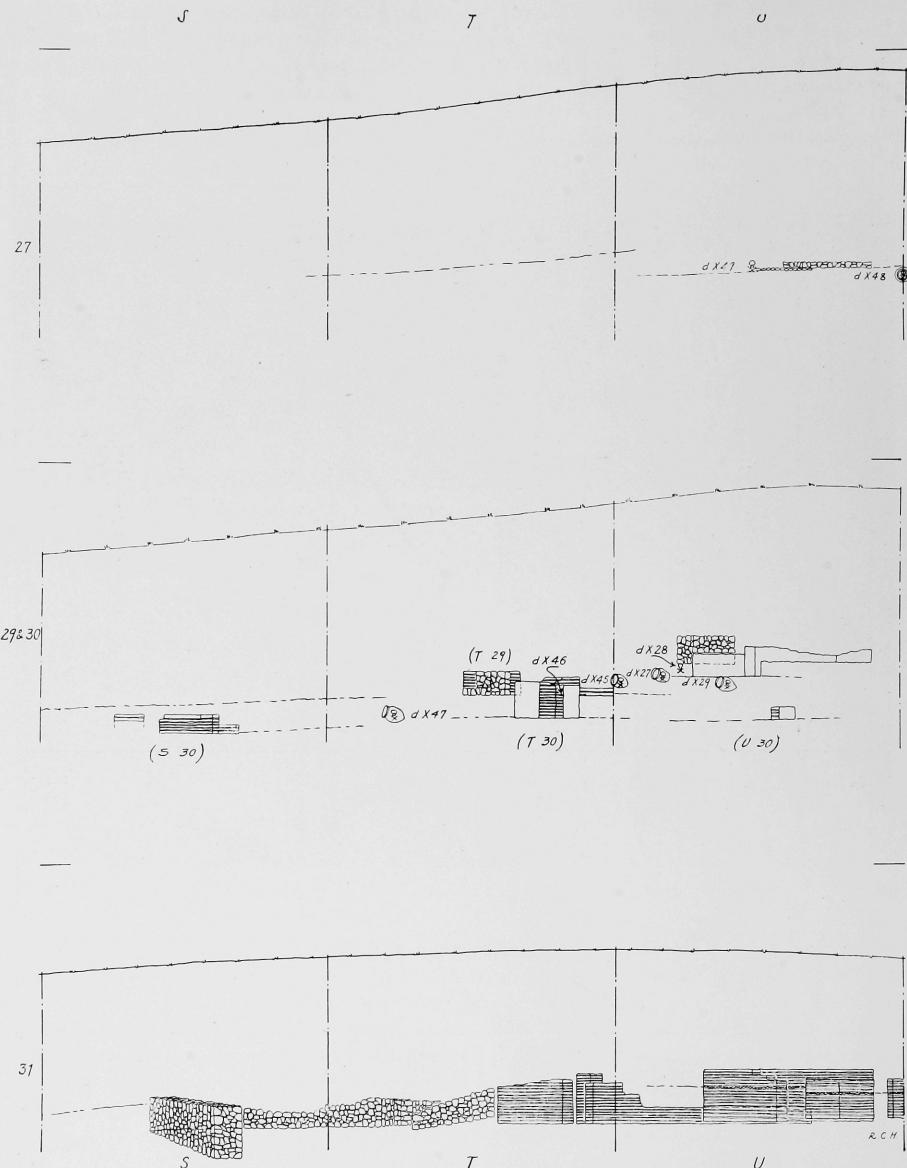


FIG. 121.—CROSS-SECTIONS OF S-U 27, S-U 29 AND 30, AND S-U 31. SCALE, 1:200

An interesting feature of this complex is that in part it protrudes through the superimposed oldest building layer of the Hittite period (Fig. 124), when leveling seemingly occurred here. The cross-section of S-U 29 and 30 (in Fig. 121) shows a gradual upward slope of the Copper Age building level toward the east.

In 1930 we unearthed two building levels of the Copper Age in L-M 29 (Fig. 125). In 1931 we pierced the older level in L 29, reaching at 7.50 what must be considered virgin soil. Six meters below the surface, in the earlier building level (14 T), well preserved remains of a



FIG. 122.—COPPER AGE REMAINS IN S-U 31, FROM EAST-NORTHEAST

building appeared (Fig. 126). All the walls were built of *kerpiç* without stone foundations; with the exception of the wall farthest west in L 29 they consisted of layers of tamped *kerpiç* with a slight variation in color. The large wall in the northwestern part of M 29 differs from the rest. A facing of *kerpiç* bricks, .40 wide, extends from the base to a height of .90, forming thus a ledge or seat on the inside (Fig. 127). The surface of the brick ledge and of the tamped *kerpiç* wall face above it was plastered with white earth .03 thick. In a narrow passage in M 29 were found fragments of a large storage vessel (c 1413, Fig. 172). A wall fragment and two pot burials (c X11-12; cf. Figs. 138-40) in L 29 belonged to Level 13 T.

In I-J 28 we found a few wall fragments belonging to Level 14 T (Fig. 128; cf. Fig. 125). In Level 13 T at a depth of 4.35 we found a few *kerpiç* wall fragments, one of stone, and a number of refuse pits (Figs. 129-30). In one of the pits were burials d X10-11 (cf. Fig. 143).



A



B

FIG. 123.—*A*. REMAINS IN T 31, SHOWING DOOR JAMB WITH SEMICIRCULAR VERTICAL CHANNEL. *B*. REMAINS IN U 31, SHOWING SEMICIRCULAR PROTUBERANCE (IN LEFT FOREGROUND) AND TWO FLOOR LAYERS

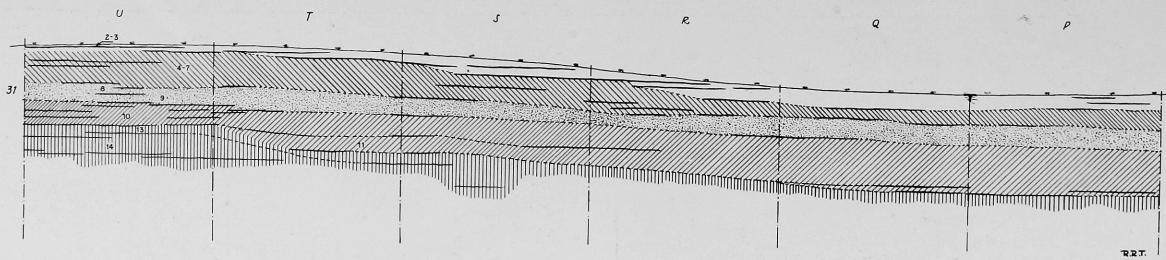


FIG. 124.—PROFILE OF SOUTH WALL OF P-U 31. SCALE, 1:300

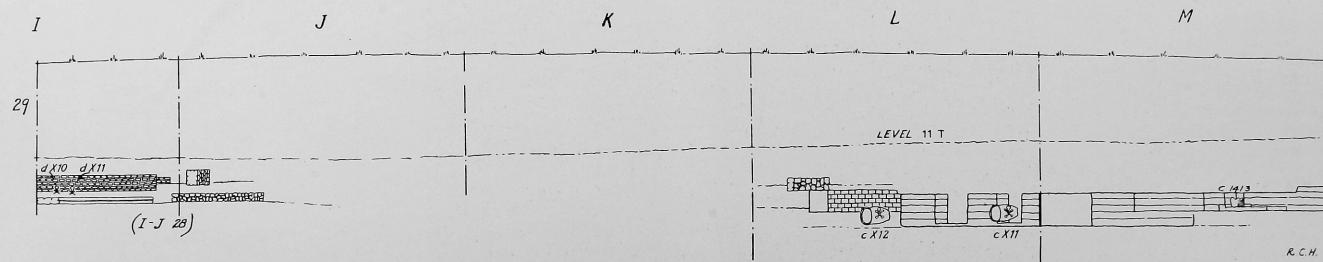
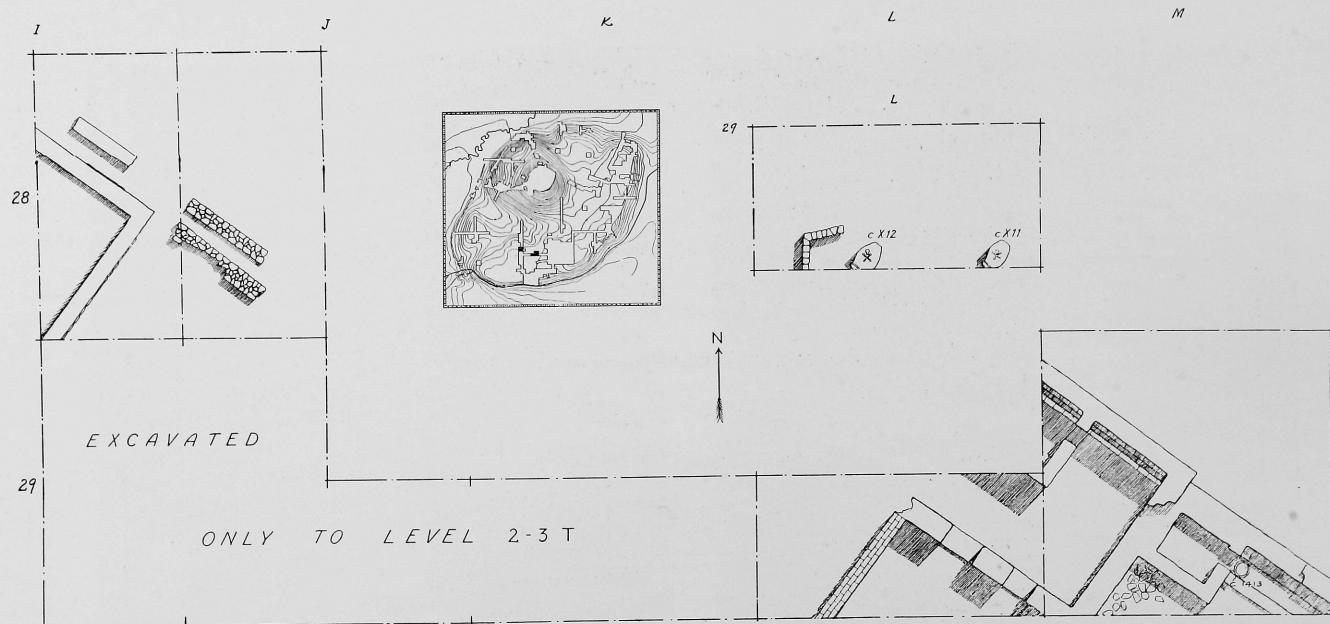


FIG. 125.—PLANS OF LEVEL 14 T IN I-J 28 AND L-M 29 AND OF LEVEL 13 T (INSET) IN L 29. CROSS-SECTIONS OF LEVELS 13-14 T IN I-J 28 (SEE ALSO FIG. 129) AND L-M 29. SCALE, 1:200.

In J 26 two burials and a *kerpiç*-lined pit were discovered (Fig. 129; cf. Fig. 141). One skeleton (c X19) lay beneath an arch formed by two inclined slabs resting on edge; the ends of the arch were closed by two other stones on edge. No. c X20 was a pot burial.

In W 24 in the earlier building period, Level 14 T, a wall of large single stones was uncovered (Figs. 131-32). Below this were found three pot burials (d X14-16) and a skeleton in a stone crypt (d X26). On the south wall of this plot the outlines of two *kerpiç* walls with successive floor levels between them could be distinguished (see Fig. 147). Various burned layers show that while the walls were in use the floor was gradually being raised. In Level 13 T (Fig. 133)



FIG. 126.—COPPER AGE REMAINS IN L-M 29, FROM EAST

there were walls built of tamped *kerpiç* laid partly on stone foundations. Large areas of tamped *kerpiç* floors were found. In the northwest corner of the plot there was a nearly circular patch of pavement.

In Z 26-28 the fragmentary walls were mostly of *kerpiç* with stone foundations (Fig. 134; cf. Fig. 117). Below the foundations three pot burials (e X3 and e X8-9) were uncovered (cf. Figs. 157 and 159-60), and on a wall near the western border of Z 28 a skeleton (e X4) was found completely crushed (cf. Fig. 158).

Near the edge of the city terrace in J-M 36 fragmentary remains of walls and pavements, part of which belonged to the Copper Age, appeared below the foundation of the large gateway structure of the Hittite period (Fig. 135).

In several of the 1927 plots on the northeastern part of the terrace we had penetrated to Copper Age building levels and found fragmentary walls and a number of burials.¹²

¹² The areas concerned were in Z-AA 12-13 (Plot XII in *OIP* VI 138), CC 13 (Plot IX *ibid.* pp. 131-32), AA-BB 13-14 (Plot X Stratigraphic Annex *ibid.* p. 241), Z 15 (Plot XVII *ibid.* pp. 147-49), AA-BB 14-15 (Plots XVIII-XIX *ibid.* pp. 144-47). Their location on the later net is shown in Fig. 280.

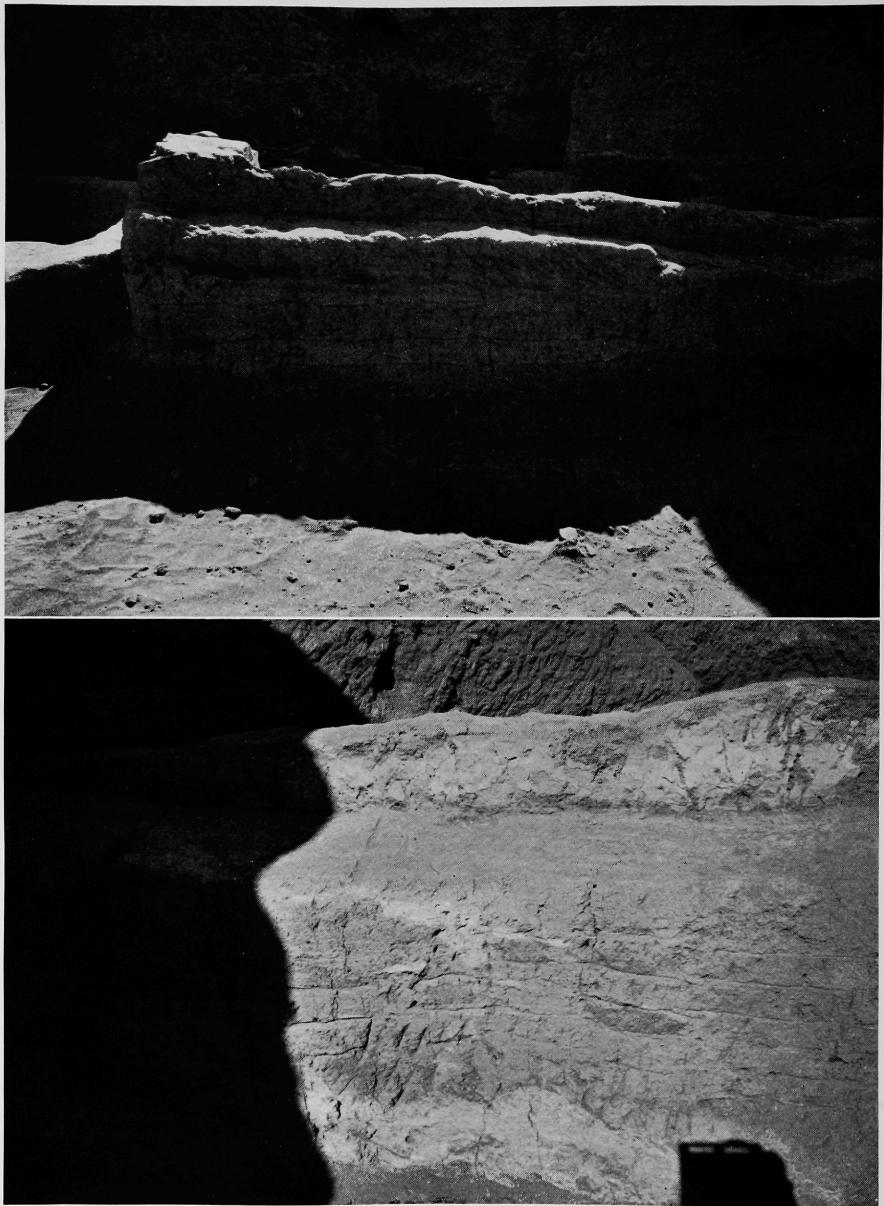


FIG. 127.—LEDGE ON INSIDE OF WALL IN M 29

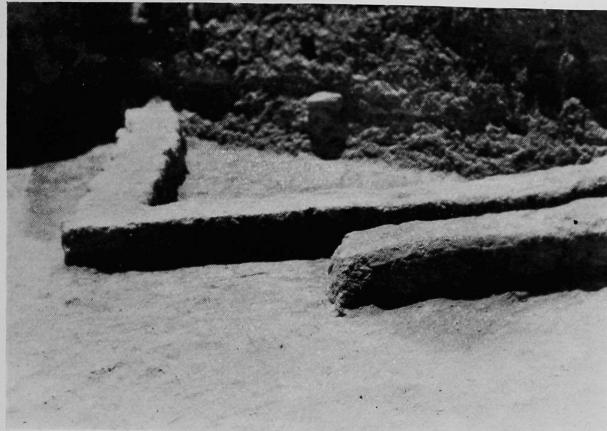
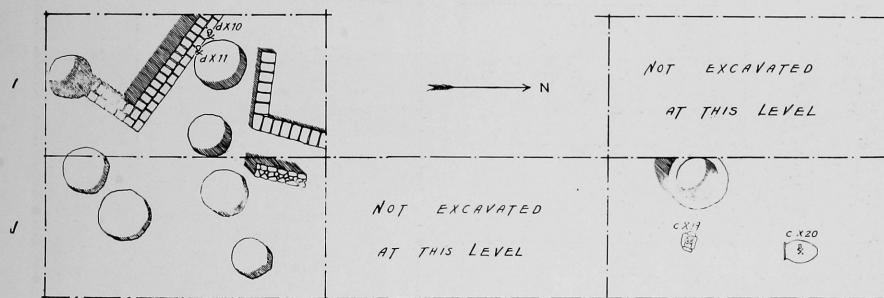


FIG. 128.—LEVEL 14 T IN I-28

28

27

26



28

26

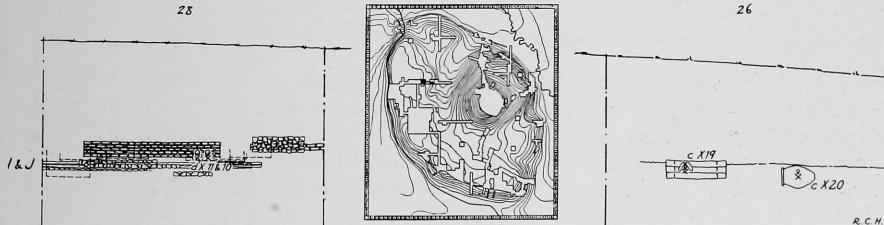


FIG. 129.—PLAN OF LEVEL 13 T AND CROSS-SECTION OF LEVELS 13-14 T IN I-J 28 (SEE ALSO FIG. 125). PLAN AND CROSS-SECTION OF THE COPPER AGE LEVEL IN J 26. SCALE, 1:200

In 1929 plots AA 15-16, adjoining Plot XVIII of 1927, were excavated. Here fragmentary wall remains and nine burials were unearthed.¹³ According to the architectural descriptions in the files of the Oriental Institute further traces of the Copper Age were found but not published. A building level of the Copper Age appeared in R 6 at a depth of 4.50-5.00. It con-



FIG. 130.—LEVEL 13 T IN I-J 28, FROM SOUTHEAST

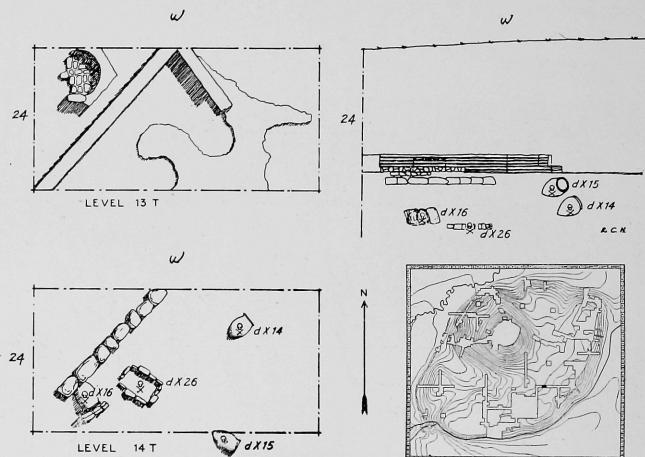


FIG. 131.—PLANS AND CROSS-SECTION OF LEVELS 13-14 T IN W 24. SCALE, 1:200

sisted of a *kerpiç* wall without stone foundation and a nearly circular tamped earth patch. In Y 7 at a depth of 4 meters two wall fragments were unearthed. In DD-EE 10 at a depth of approximately 4 meters fragmentary walls, a number of pits, and one burial (b X46) were found. In S 23 at a depth of 3.30 a semicircular wall bordered a pavement of small sharp stones; a small *kerpiç* wall fragment protruded from the southern plot wall. Skeleton b X68, found in DD 19, may belong to the Copper Age, but I am inclined to ascribe it to the Early Bronze Age.

¹³ OIP XIX 72-77.



FIG. 132.—LEVEL 14 T IN W 24, FROM NORTHEAST



FIG. 133.—LEVEL 13 T IN W 24, FROM EAST-NORTHEAST

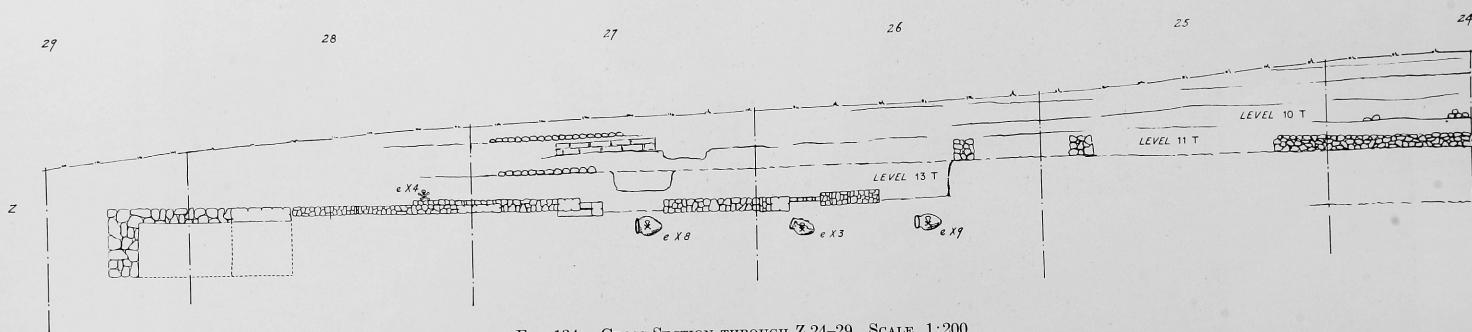


FIG. 134.—CROSS-SECTION THROUGH Z 24-29. SCALE, 1:200

In A-B 8, R-S 0, W 1, FF-GG 2-3, JJ 5-6, II-JJ 11-13, II 14, DD-EE 19, X 19, L-M 35-36, J 22-26, and wherever we followed the foundations of the Hittite outer defense wall, the great number of typical pottery fragments proved the presence of a cultural deposit of the Copper Age, although no actual architectural remains of this period have yet been found there.



FIG. 135.—REMAINS IN J-M 36

BURIALS

Of the forty-six burials¹⁴ found from 1927 to 1932 in the levels of the Copper Age at Alişar, twenty-five had been deposited in large individual jars. The jars were usually of the type of Nos. e 686 and b 3262 (Fig. 172 and Pl. VIII). In two cases, burials 3206 and 3206a, two "breasts" appeared close together on the upper part of the pot (cf. Fig. 173). On the shoulder of the burial jar of e X3 were two small handles. Evidently the bodies were usually deposited on the side in a flexed position, the skull toward the orifice of the jar. No. 3209 was the only burial found in which the skeleton was inverted. In one case (c X20) the bottom of the jar seems to have been broken to allow extension of the feet. Skeleton d X15 was found in a dorsal position, possibly due to subsequent disturbance of the jar. The burials did not show any specific orientation. The jars were often tilted; they seem to have been deposited below the floor levels of rooms, and the orifices were then closed either with one large stone slab or with several smaller stones. In several instances the orifices seem to have been boxed up with slabs. There is evidence that in most cases the burial jar and the stone slabs were

¹⁴ Burial b X68 (cf. p. 230) is not included in this number.

covered with *kerpiç*. Besides these burials, four pot burials of another type were found in which the skeletons were those of children. It is not certain whether Nos. 3211a and b X14 were actually pot burials or whether the remains of the children were simply covered with fragments of large vessels. Skeletons b X6 and b X9, both of very small children, were found in upright vessels without cover slabs.

Eleven of the bodies uncovered had been deposited directly in the earth, but three of them may not have been actual burials. The bodies usually lay on either the left or the right side and favored no particular orientation. Several of these skeletons were found in round pits containing earth, ashes, and other débris. I believe that these were not regular burial cists, but refuse pits used for burial purposes. Only one burial seems to me to be an actual cist burial

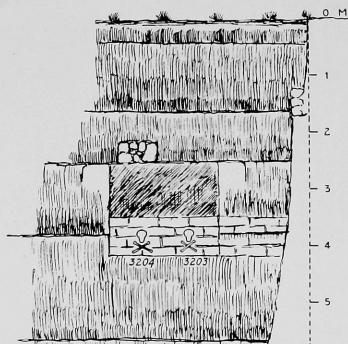


FIG. 136.—CROSS-SECTION THROUGH AA 12,
SHOWING A CIST BURIAL BELOW A LATER REF-
USE PIT



FIG. 137.—SUN-DRIED BRICK FROM BURIAL d X29. SCALE, 1:2

(Fig. 136). It is that of skeletons 3203-4, unearthed in 1927. The two bodies, each in lateral flexed position, seem to have been deposited in a small rectangular cist lined with *kerpiç* bricks.

Three stone-box burials were found. One of these (3224) was especially interesting because its floor had been paved; the contents were so disarranged as to suggest subsequent disturbance or perhaps secondary burial.

Of the forty-six skeletons, twenty-three had been laid on the left side (eight males, two females, six children, and seven indeterminable) and nine on the right (six males, one female, one child, and one indeterminable). Twenty burials had mortuary gifts, most of them quite simple—a pair of earrings, a bent pin, on rare occasions a bracelet or one or two small vessels, and in one case a necklace. It is most probable that all bodies were wrapped in shrouds, often held together by pins. With burials 3208, 3211a, and d X29 a few sun-dried mud bricks were found. As far as the dimensions could be ascertained the bricks seemed to be cubical. In the center of one side of each brick was a round depression from which two or three grooves extended toward each corner (Fig. 137). In burial 3211a fragments of several such bricks were found. That this type of brick has some relation to burial customs seems quite possible (cf. p. 51). For skeleton b X69 no data are available.

For the craniological material see *OIP XXX*.

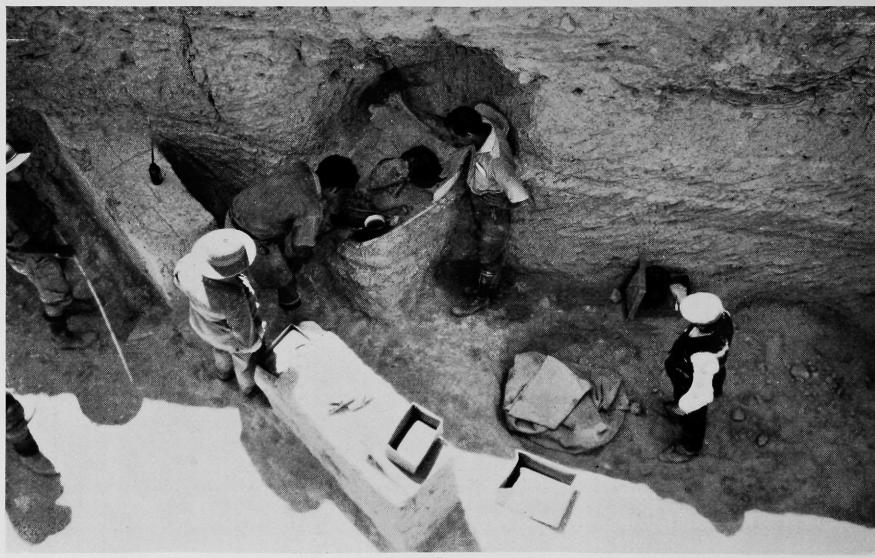
LIST OF BURIALS

- 3200 Pot burial in CC 13 (*OIP VII* 2-3, Skeleton X₁ in Plot IX;¹⁵ *OIP XX* 123 and Tables I-II). The skeleton of an adult male lay on its left side, flexed, in a general east-west direction with skull to the west. A bent copper or bronze pin was found lying on the right side of the chest.
- 3202 Pot burial in CC 13 (*OIP VII* 4-5, Skeleton X₃ in Plot IX). The skeleton of an adult male lay on its left side, flexed. The orifice of the pot, pointing south, was closed with a large stone slab. At the center of the left humerus in front of the chest a copper or bronze pin was found.
- 3203-4 Cist burial in AA 12 (*OIP VII* 12-14, Skeletons X₁-X₂ in Plot XII; *OIP XX* 123 and Tables I-II). The skeletons of two females, each flexed and lying on the left side, were found in a *kerpiç* cist 1.60×1.00. The long axis of the cist extended north-south. In skeleton 3204, a girl of about 15, the direction from sacrum to atlas was 34° south of east. The right hand was extended in front of the face; the left rested below the thoracic vertebrae of the juvenile skeleton 3203. The sacrum-to-atlas direction of 3203 was 28° south of east. The bones of either a fetus or a very young child were found on and a little to the side of the pelvis.
- 3206 Pot burial in AA 15 (*OIP VII* 19-20, Skeleton X₃ in Plot XVIII). The skeleton of an adult male lay on its right side, flexed. The direction from sacrum to atlas was 28° north of west. A small copper or bronze ring was found near the vertex. The burial pot had two "breasts" on its upper part (cf. Fig. 173).
- 3206a Pot burial in AA 15 (*OIP VII* 17-19, Skeleton X₂ in Plot XVIII). The skeleton of a child lay on its left side, flexed. The orifice of the pot was toward the south. The skeleton lay in the same direction as the pot, the skull to the south. There were two "breasts" on the upper part of the pot.
- 3207 Earth burial in AA 15 (*OIP VII* 20, Skeleton X₄ in Plot XVIII). The skeleton of an adult female lay on its right side, flexed. The direction from sacrum to atlas was 26° west of south.
- 3208 Pot burial in BB 14 (*OIP VII* 20, Skeleton X₅ in Plot XVIII). The skeleton of a child lay on its left side, flexed. The orifice of the pot, pointing north, was closed by stones. A sun-dried mud brick was with the body (cf. p. 136). A short bone awl lay near the feet and a copper or bronze pin in front of the chest.
- 3209 Pot burial in AA 15 (*OIP VII* 20-21, Skeleton X₆ in Plot XVIII; *OIP XX* 123 and Tables I-II). The skeleton of an adult male lay on its left side, flexed, head pointing northwest. The body seems to have been stuffed into the pot head first.
- 3211a Pot burial in BB 14 (*OIP VII* 7, Skeleton X₄ in Plot X Stratigraphic Annex). The skeleton of a child lay on its right side, flexed. The direction from last lumbar vertebra to atlas was 15° east of south. The skeleton was half buried under a big pot. Several pieces of bricks were found (cf. p. 136); no special arrangement of them could be recognized. A white tubular bead, near the left hand and the chest, and a perforated animal tooth, found at the neck below the mandible, were probably mortuary gifts.
- 3212 Earth burial in BB 13 (*OIP VII* 7-9, Skeleton X₅ in Plot X Stratigraphic Annex; *OIP XX* 123 and Tables I-II). The adult male skeleton lay on its left side, flexed. The direction from sacrum to atlas was 28° south of west. The skeleton was buried in a pit cut into the natural soil and filled with earth and ashes.
- 3213 Earth burial in FF-GG 4 (*OIP VII* 23, Skeleton X₁ in Plot XXV). The fragmentary skeleton of a sub-adult female was lying in a ventral position. It was found near the surface on the edge of the terrace, where the cultural deposits were very much disturbed. Since numerous Copper Age sherds were found there and since the skull resembles others of the Copper Age in shape, I do not hesitate to attribute this skeleton to this period.
- 3224 Stone box burial in BB 14 (*OIP VII* 9-12, Skeleton X₆ in Plot X Stratigraphic Annex; *OIP XX* 123 and Tables I-II). The very much disturbed skeleton of an adult male, possibly a secondary burial, was found in a box formed of stone slabs and with paved floor. Two stone "whorls" were probably mortuary gifts.
- b X6 Pot burial in AA 16 (*OIP XIX* 75). The skeleton of a newborn infant was in an upright pot without a cover slab. The skeleton was lying on its left side, flexed, tipped at an angle of approximately 45°. The direction of the spinal column was 30° west of north.
- b X7 Pot burial in AA 15 (*OIP XIX* 75-77). The skeleton of an adult of indeterminable sex lay in a dorsal flexed position. The direction from sacrum to atlas was 14° west of south. The pot was tipped; its mouth was toward the southwest. It was covered by a large flat stone slab with ten small stones arranged around the rim to complete the closing. A copper or bronze pin was found just above the right *caput humeri*.
- b X8 Pot burial in AA 15 (*OIP XIX* 74-75; *OIP XX* 127-28 and Tables I-II). The skeleton of an adult male lay on its right side, flexed. The direction from sacrum to atlas was 14° north of west. A curved copper or bronze pin was found near the right *caput humeri*.
- b X9 Pot burial in AA 16 (*OIP XIX* 75). The well preserved skeleton of an infant less than a month old lay on its left side, flexed, in a small upright pot (b 653, Pl. VIII) without a cover slab.

¹⁵ Cf. p. 129, n. 12.



A

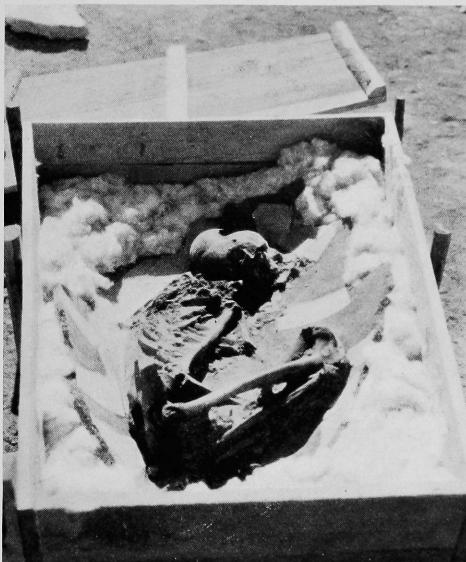


B

FIG. 138.—*A*. UNOPENED JAR OF BURIAL c X11 OF LEVEL 13 T, FOUND BESIDE A WALL OF LEVEL 14 T. *B*. THE BURIAL BEING PREPARED FOR REMOVAL



A



B

FIG. 139.—*A*. BURIAL c X11 READY FOR REMOVAL. *B*. THE BURIAL READY TO BE SHIPPED

- b X10 Pot burial in AA 16 (*OIP XIX* 74). The poorly preserved skeleton was that of a mature person of indeterminable sex. Its original position is doubtful, but it was surely flexed. The pot lay with its mouth to the southwest.
- b X11 Earth burial in AA 16 (*OIP XIX* 75). The skeleton was that of an adult of indeterminable sex; the skull was missing. The skeleton lay on its left side, flexed. The direction from sacrum to atlas was 36° north of west.
- b X12 Earth burial in AA 16 (*OIP XIX* 77). Only the lower legs and feet of this adult skeleton were preserved. The direction was probably northeast to southwest.
- b X13 Earth burial in AA 16 (*OIP XIX* 77). This was the skeleton of a child, of which only the lower legs and feet were preserved. The direction was probably northeast to southwest.¹⁶

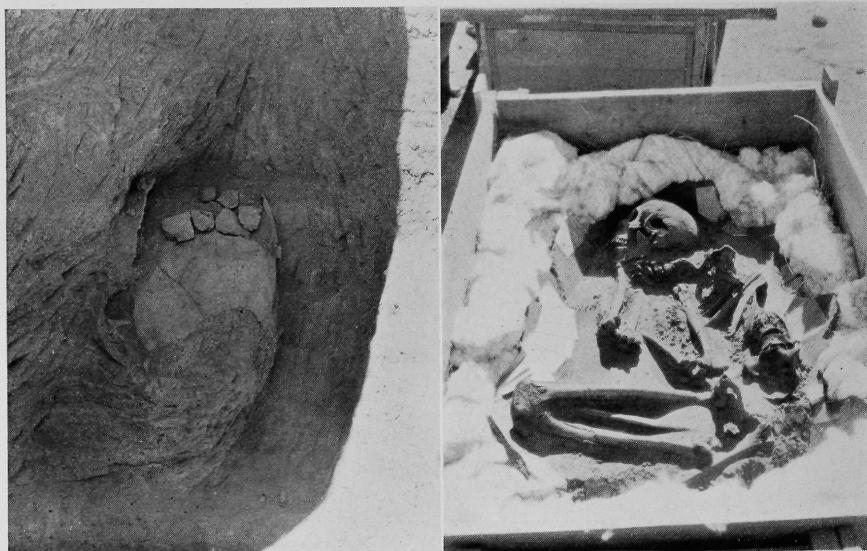


FIG. 140.—A. BURIAL c X12 *in situ*. B. THE BURIAL CLEANED AND READY TO BE SHIPPED

- b X14 Pot(?) burial in AA 16 (*OIP XIX* 73-74). The poorly preserved skeleton of a child of approximately four years lay on its left side, flexed. The direction from sacrum to atlas was 30° west of north. It could not be determined whether the body had been placed in a pot or laid in the earth and then covered with fragments of a large vessel.
- b X46 Pot burial in EE 10 (*OIP XIX* 77-78). The skeleton of an adult male(?) lay on its right side, flexed. The pot was tipped about 25°, with the mouth up and pointing 30° south of west. The dip and direction of the skeleton were the same. The orifice of the pot was boxed in with five stone slabs which formed an integral part of a later wall. A copper or bronze pin was found at the left side of the mandible.
- b X69 No data except that Copper Age pin b 2680 was found with it (*OIP XIX* 61).
- Two mandibles of adults were found in the refuse of L 14-15¹⁷ and one in AA 16.
- c X11 Pot burial in L 29 (Figs. 138-39). The skeleton of an adult male was found 5.40 deep, below the floor level of the later building period of the Copper Age (Level 13 T). The skeleton was on its left side, flexed. The right arm was slightly flexed, with the hand in front of the pelvis; the left was completely flexed, with the hand at the mandible. The direction from sacrum to atlas was 35° south of west. The jar had a bearing of 35° west of south and a dip of 30°. The orifice was up and was covered by a large stone slab.

¹⁶ Misprinted in *OIP XIX*.

¹⁷ *OIP XIX* 78.



A



B

FIG. 141.—*A*. PLOT J 26 FROM NORTHWEST. *B*. CLOSER VIEW OF BURIAL *c X19*

- c X12 Pot burial in L 29 (Fig. 140). The skeleton of an adult male was found 3.70 west of c X11 and beneath the same floor level. The skeleton was in a position similar to that of c X11, but on the right side. The direction from sacrum to atlas was 10° west of south. The jar had a bearing of 40° west of south and a dip of 28°. The orifice was up and was covered by a large stone slab.
- c X19 Stone box burial in J 26 (Fig. 141). The skeleton of an infant was found 3.50 below the surface in a Copper Age refuse layer above which there were no architectural remains of this period. The skeleton lay on its left side, flexed. The direction from sacrum to atlas was 5° south of east. A rough stone box had been built around the body.



c 2657



FIG. 142.—BURIAL c X20 IN J 26. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

- c X20 Pot burial in J 26 (Fig. 142; *OIP* XX 127-28, 136, and Tables I-II). The skeleton of an adult male was found 3.40 north of c X19 and with the same associations. The skeleton lay on its right side, flexed. The bearing of the burial jar was south, with a dip of 18°. The orifice was up and was covered with a stone slab. The bottom of the jar seems to have been broken to allow the extension of the feet. A large-headed copper or bronze pin (c 2657) was a mortuary gift.
- d X10 Earth burial in I 28 (Fig. 143). The skeleton of an adult male was found 3.75 deep in what seems to have been a refuse pit cut into a roughly tamped earth floor. The skeleton lay on its left side, flexed. The direction from sacrum to atlas was 15° east of south.
- d X11 Earth burial in I 28 (Fig. 143). No data could be obtained concerning the skeleton because of its poor preservation. The bone fragments were 3.75 deep in the same pit with d X10.
- d X14 Pot burial in W 24 (Fig. 144). The burial was found 5.70 below the surface. It cannot be decided with certainty whether it belonged to Level 13 T or to Level 14 T. The skeleton was completely disintegrated, but it was possible to recognize that it had lain on its left side, flexed, and that the direction from sacrum to atlas was 40° north of east. The jar had a bearing of 30° east of north and a dip of 15° with orifice up. Among the disintegrated copper or bronze mortuary gifts were a necklace (d 1100a) consisting of alternating large and small beads and a fragmentary pin (d 1100b).



A



B

FIG. 143.—*A*. REFUSE PIT IN I-J 28 CONTAINING SKELETONS d X10-11. *B*. CLOSER VIEW OF THE BURIALS

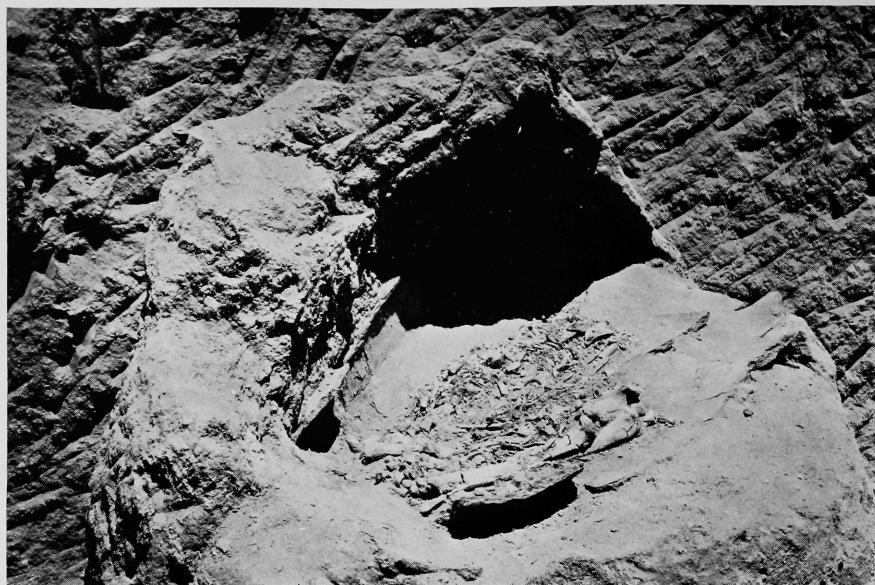


FIG. 144.—BURIAL d X14. THE MORTUARY GIFTS ARE SHOWN IN ACTUAL SIZE

- d X15 Pot burial in W 24 (Fig. 145; cf. Fig. 147). The burial was in the same plot with d X14, but belonged definitely to Level 13 T. This skeleton also was completely disintegrated; it seems to have been laid on its back with crossed knees. The direction from sacrum to atlas was 5° south of east. The pot, covered with a large slab, was so completely broken as to make it impossible to take the dip or bearing, but the latter was roughly east. A copper or bronze pin with scrolled head (d 1101) was found at the neck as a mortuary gift.
- d X16 Pot burial in W 24 (Fig. 146). The skeleton was found 6.10 deep. It was completely disintegrated but seemed to have lain on the left side in a semiflexed position with hands in front of face. The direction from sacrum to atlas was roughly southeast. The jar had a bearing of 40° east of south and a dip of 17° with orifice up. Flat stone slabs closed the orifice. A pin with a large globular head (d 1102a), a bracelet (d 1102b), and some completely disintegrated objects, all of copper or bronze, were found as mortuary gifts.



d 1101

FIG. 145.—BURIAL d X15. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

- d X26 Stone box burial in W 24 (Figs. 147-49; *OIP* XX, Tables I-II). The skeleton of a juvenile male was in a stone box at a depth of 6.15. The skeleton lay on its right side, flexed. The left arm was bent at a right angle at the elbow. The right lower arm was disarticulated and extended from pelvis to feet. The direction from sacrum to atlas was 10° north of west. A small perforated stone pendant (d 1377) was found near the ribs.
- d X27 Pot burial in U 30 (Fig. 150). The poorly preserved skeleton was found 5.85 deep, below the floor level of Copper Age buildings belonging to Level 13 T. The skeleton had been laid on its left side in a flexed position. The direction from sacrum to atlas was 30° south of west. The bearing of the pot was southwest with a dip of 10°, orifice up. The orifice was closed with stone slabs. Some completely corroded small copper or bronze objects and a copper or bronze pin (d 2977) were burial gifts.
- d X28 Earth burial(?) in U 30 (Fig. 151). The remains of a skeleton were found at a depth of 5.95. The very fragmentary bones were in a complete jumble, and it is not at all certain that this is a burial or even that it belongs to the Copper Age.
- d X29 Pot burial in U 30 (Fig. 152). The almost decomposed skeleton, found at a depth of 6.15, had seemingly been deposited on its right side in a semiflexed position. The bearing of both pot and skeleton was southwest. The pot had a dip of 17°; its orifice was up and was covered by a flat stone slab. A mud brick was



d 1102a



d 1102b

FIG. 146.—BURIAL d X16. THE MORTUARY GIFTS ARE SHOWN IN ACTUAL SIZE

found with the skeleton (Fig. 137; cf. p. 136). A copper or bronze pin (d 2997) and traces of other copper or bronze mortuary gifts were found.

d X45 Pot burial in U 30. A completely disintegrated skeleton was found at a depth of 5.80. The burial jar was closed with a stone slab. The pot had a bearing of 45° west of south and a dip of 20°, the orifice being up. A badly corroded copper or bronze pin was a mortuary gift.

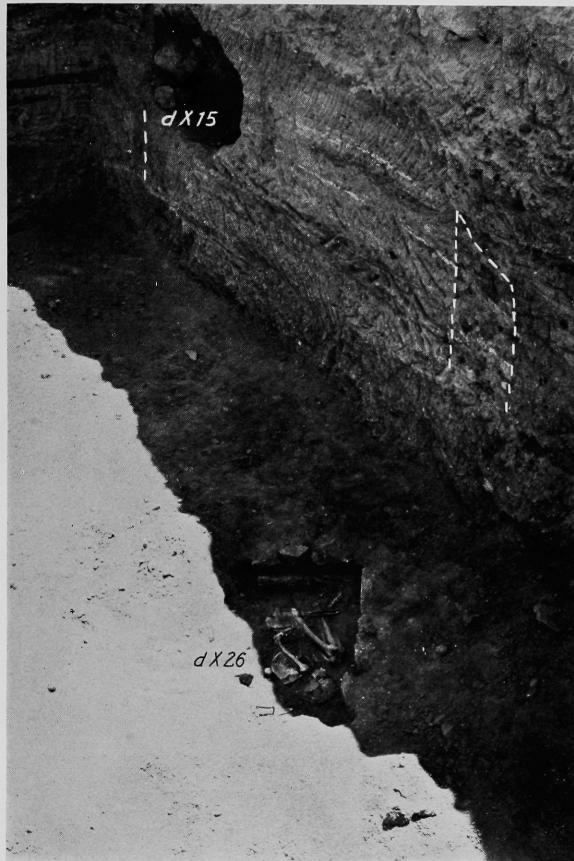


FIG. 147.—SOUTH WALL OF W 24, WITH BURIALS d X15 AND d X26. THE PROFILES OF TWO *Kerpic* WALLS HAVE BEEN OUTLINED

d X46 Pot burial in T 29 (Fig. 153). The burial was found at a depth of 6.50, below the floor level of Level 13 T. The fragmentary skeleton permitted only the recognition that it lay on its left side in a flexed position, with a direction from sacrum to atlas of 40° west of south. The pot had the same bearing and a dip of 20°, the orifice up. The orifice was closed by a single large stone slab. A small vessel (d 2762, Fig. 168) and a copper or bronze pin (d 2761) were mortuary gifts.

d X47 Pot burial in T 29 (Fig. 154). The extremely poorly preserved skeleton was found at a depth of 6.55. It was on its left side in a semiflexed position with a direction from sacrum to atlas of 20° south of west. The



d 1377

FIG. 148.—BURIAL d X26. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

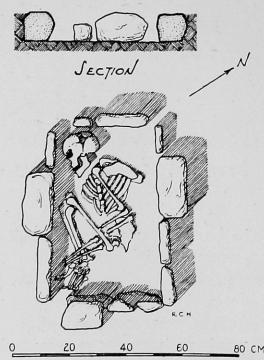


FIG. 149.—BURIAL d X26. SCALE, 1:20

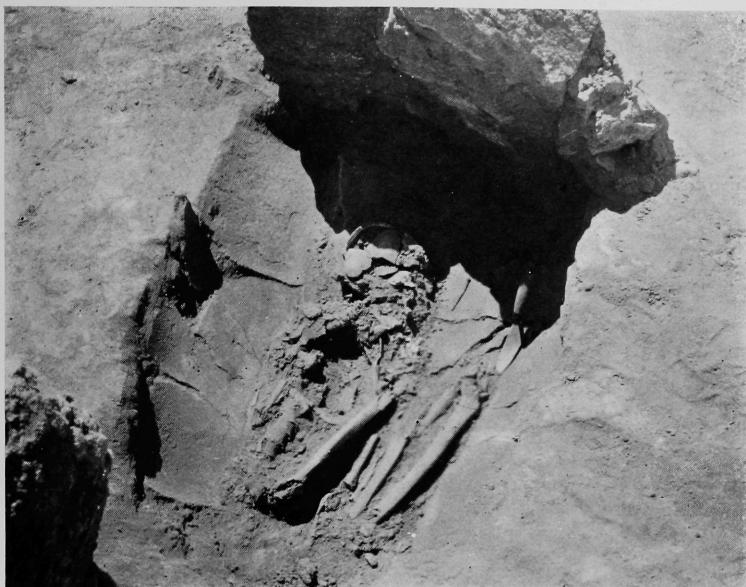


FIG. 150.—BURIAL d X27. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE



FIG. 151.—BURIAL d X28

- pot had the same bearing and a dip of 20° with orifice up. The orifice was closed with two flat stone slabs. Two vessels (d 2763-64, Fig. 168) and a badly corroded copper or bronze pin were mortuary gifts.
- d X48 Pot burial in U 27 (Fig. 155). The skeleton of an adult male, found at a depth of 6.60, belonged to a building layer of the Copper Age, probably Level 13 T. The skeleton lay on its left side in a semiflexed position, the skull dorsal and to the right; the mandible was fallen and reversed. The direction from sacrum to atlas was 8° west of south. The pot had a bearing of 20° east of south and a dip of 20° with orifice up. The orifice was covered by a large stone slab. A copper or bronze pin (d 2894) and bracelet (d 2895) were mortuary gifts. With the skeleton was found a human upper incisor in a section of maxilla.
- d X49 Earth burial in U 27 (Fig. 156). The skeleton of a child was found at a depth of 6.30. It lay in a dorsal half-upright position. The knees projected to the right, and the hands were lying over the pelvis. The direction from sacrum to atlas was 10° north of east.



d 2997



FIG. 152.—BURIAL d X29. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

- e X3 Pot burial in Z 26 (Fig. 157). The fragmentary skeleton of an adult male was found at a depth of 4.20. The bones were so disturbed that nothing can be said as to the position of the body. The direction of the burial jar was 40° east of south, orifice south. The orifice was covered with a large stone slab.
- e X4 Earth burial(?) in Z 28 (Fig. 158). The completely crushed skeleton was found on top of a wall. A large, roughly egg-shaped lump of clay was lying with its point at the base of the skull. Everything suggests that this is not a burial but the remains of a person who met with an accidental death, perhaps even by this pointed lump of clay (cf. b X17, p. 230).
- e X8 Pot burial in Z 27 (Fig. 159). The skeleton of an adult male was found at a depth of 3.80, below the floor level of a room. The skeleton lay on its left side, flexed. The direction of the burial jar (e 686, Fig. 172) was 40° west of south, orifice south. The orifice was boxed in with stone slabs. A bent copper or bronze pin (e 679) was lying on the left shoulder.
- e X9 Pot burial in Z 26 (Fig. 160). The skeleton was completely disintegrated. All that can be said is that the body was placed laterally, probably on the left side. The direction of the burial jar was 35° west of south, orifice south. The orifice was closed by a large stone slab. A bent copper or bronze pin (e 680) was a mortuary gift.

POTTERY

All the pottery of the Copper Age is handmade.¹⁸ The vessels generally show a thick red slip, more or less carefully burnished. Except for a few rather fine cups or small bowls, the ware is medium to coarse; it is usually plant-tempered. Painted sherds or vessels are rare and



d 2761

FIG. 153.—BURIAL d X46. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

seem to occur either at the very beginning of the Copper Age or toward its end. As already stated (cf. p. 111), the fine reddish buff ware with purplish brown geometrical ornamentation, which appeared at the end of the Copper Age, will not be discussed here but will be considered in the chapter dealing with the Early Bronze Age. A few incised sherds were found, as well as some which are fluted or corrugated. Typical forms are bowls and cups with rounded bottoms and one-handled jars. The forms are rather primitive and no longer display the great variety of the Chalcolithic age. In contrast with those of the earlier period, most of the Copper

¹⁸ The only possible exception is a small flask, No. d 2762 (cf. p. 176).

Age forms are of decidedly inferior artistic grade. Pitcher d 2763 and cup d 2764, found with skeleton d X47, are the best examples of Copper Age ware found at Alişar.

PLAIN WARE

Sherds and vessels of plain red-slipped ware are the most common; the paste is plant-tempered. Red-slipped ware had already appeared sporadically in the Chalcolithic layers, but

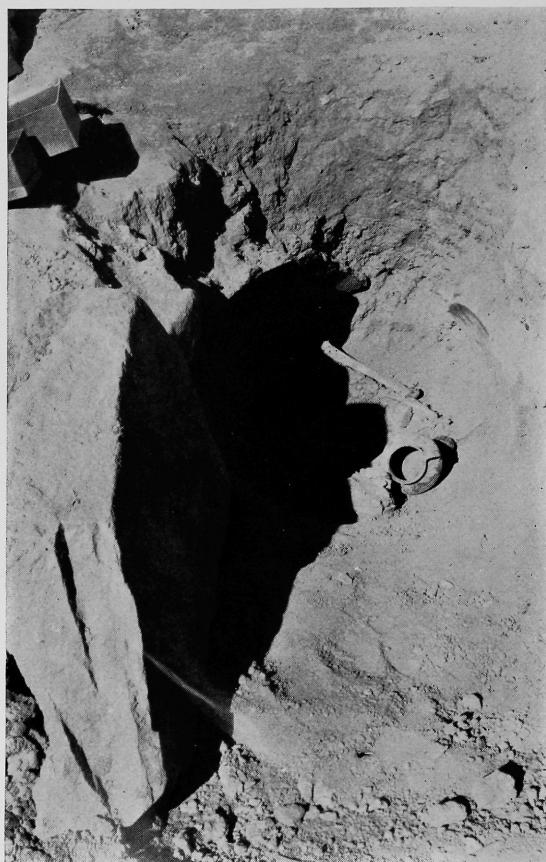


FIG. 154.—BURIAL d X47

there the paste was grit-tempered. The color of the early red-slipped ware (cf. p. 54) was either very light brick red or dark red, whereas rich red in various shades (Pl. III 1 [= Fig. 161 2], 2 [= Fig. 166 3], and 3 [= Fig. 165 6]) is usual in the Copper Age. These colors as well as a few variations between light reddish brown and tan are probably due to firing. Smoke stains sometimes present interesting mottled effects. Black-topped sherds also were found, especially in the earlier levels. In every instance the slip is either polished or burnished,



d 2895

d 2894



FIG. 155.—BURIAL d X48. THE MORTUARY GIFTS ARE SHOWN IN ACTUAL SIZE

sometimes very carefully (e.g., Fig. 161 5, 7). Occasionally the slip is thin, almost resembling a wash (e.g., Fig. 161 8). On several vessels, most of which were bowls, only the inside is slipped (e.g., Fig. 181 18). This inside slip often extends over the rim, forming a red band of variable width on the outside (e.g., Fig. 161 3, 6).

The ware of the large storage or burial vessels is usually coarse. The inside is blackened from firing. The outside frequently shows traces of a light brown slip, roughly polished; more often, however, it is simply wet-smoothed.



FIG. 156.—SKELETON d X49

DECORATED WARE

Decorated vessels are nearly always either small cups or pitchers with cylindrical necks and lateral spouts.

Painted sherds were found in the oldest layers of the Copper Age in L 14-16. Fragments of cups (or small bowls?) of fine grit-tempered paste with a light buff slip and brownish red linear ornamentation on the outside and rim (Pl. III 5 [=Fig. 163 5] and Fig. 162 1-5) resemble the painted ware found in the last two Chalcolithic layers. In a few cases zigzag ornamentations or lozenges were found, as well as parallel lines encircling the vessel (Pl. IV 4). In nearly all cases the inside was finished in the same manner or covered entirely with a polished red slip. No. e 1621 (Fig. 169), a fragmentary small jar found in Level 11 M, shows diagonal purplish brown bands on a highly polished yellowish brown slip.

Painted sherds were found in the latest Copper Age level also (Pl. IV 1 [=Fig. 163 4], 2 [=Fig. 164 4], 3 [=Fig. 164 5], 5 [=Fig. 163 3], and 6 [=Fig. 164 3] and Figs. 162 6-8, 163 1-2,



FIG. 157.—BURIAL e X3

and 164 6-7). On a fragmentary cup found in Level 7 M the inside slip extends over the rim to the shoulder on the outside, and from there on single lines go more or less vertically toward the bottom, giving the impression that the slip had run down (Fig. 162 6). This ornamentation is similar to that on a pitcher (a 1066) found in 1928.¹⁹ A cup fragment with a thick creamy



FIG. 158.—SKELETON e X4

white slip shows a reddish brown zigzag design (Pl. IV 1 [=Fig. 163 4]). Plate IV 3 (=Fig. 164 5) shows a cream-colored linear ornamentation on a dark red slip. An entire pitcher of this type (b 331) had been found in 1929,²⁰ and a fragment of a similar one was found in 1932 (Fig. 164 6). Another fragment has the typical rich red slip of this period with cream-colored

¹⁹ *OIP* XIX, Fig. 44.

²⁰ Most of the 1929 ("b") objects here cited have been published in *OIP* XIX. Descriptions may be located from the Index of Field Numbers in that volume.

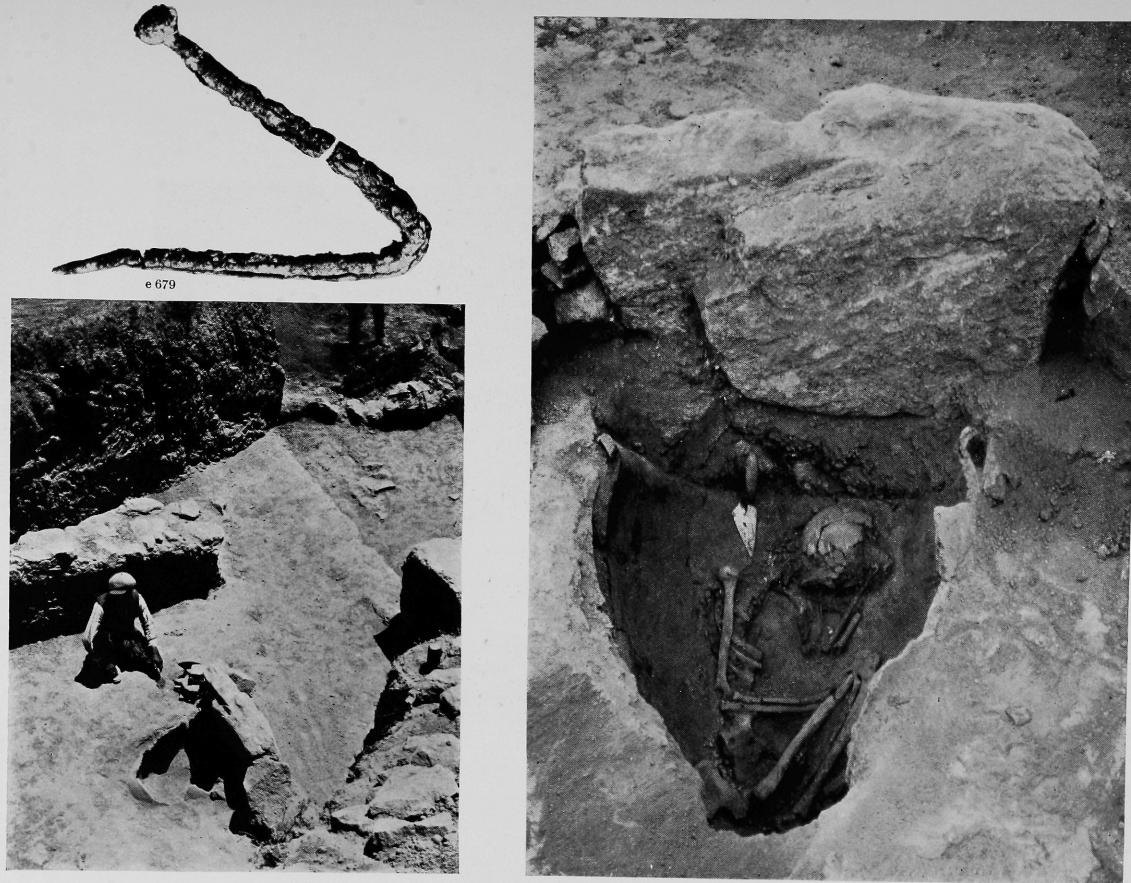


FIG. 159.—BURIAL e X8. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

ornamentation (Pl. IV 6 [= Fig. 164 3]); and a small cup fragment (Pl. IV 2 [= Fig. 164 4]) has a brick red design on a brown slip. Two sherds with highly polished yellowish brown slips (Pl. III 4 [= Fig. 162 7] and Fig. 164 7) have linear ornamentation in dark brown and reddish brown respectively, but it is probable that these are not the original colors of the designs.



FIG. 160.—BURIAL e X9. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE

Another type of ornamentation appears on bowls b 379a and b 135 (Pl. VIII). The rim shows on inside and outside a brown-red or grayish red wash or slip.²¹ Rim pieces of similar vessels were found in the later Copper Age levels.

A fine grit-tempered pottery, covered with a buff slip decorated with vertical red bands, is perhaps an imported ware (Pl. IV 7 [= Fig. 164 1] and Fig. 164 2). All such fragments collected seemed to be pieces of two-handled cups similar to several complete ones found in 1929 (b 37, b 139, and b 332 in Pl. VIII) which resemble closely those of Troy II.

²¹ *OIP* XIX 45 and 41.

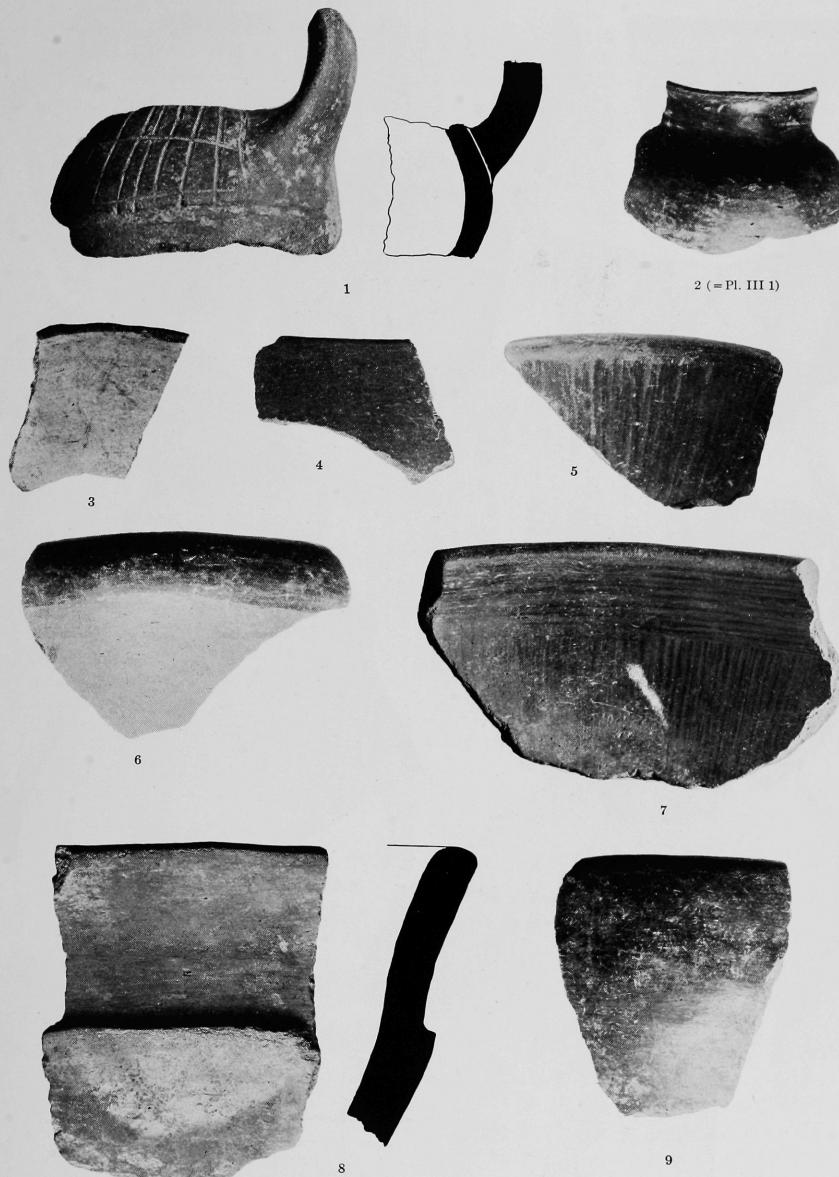


FIG. 161.—SHERDS OF RED-SLIPPED WARE. SCALE, 1:2



FIG. 162.—PAINTED SHERDS. ACTUAL SIZE

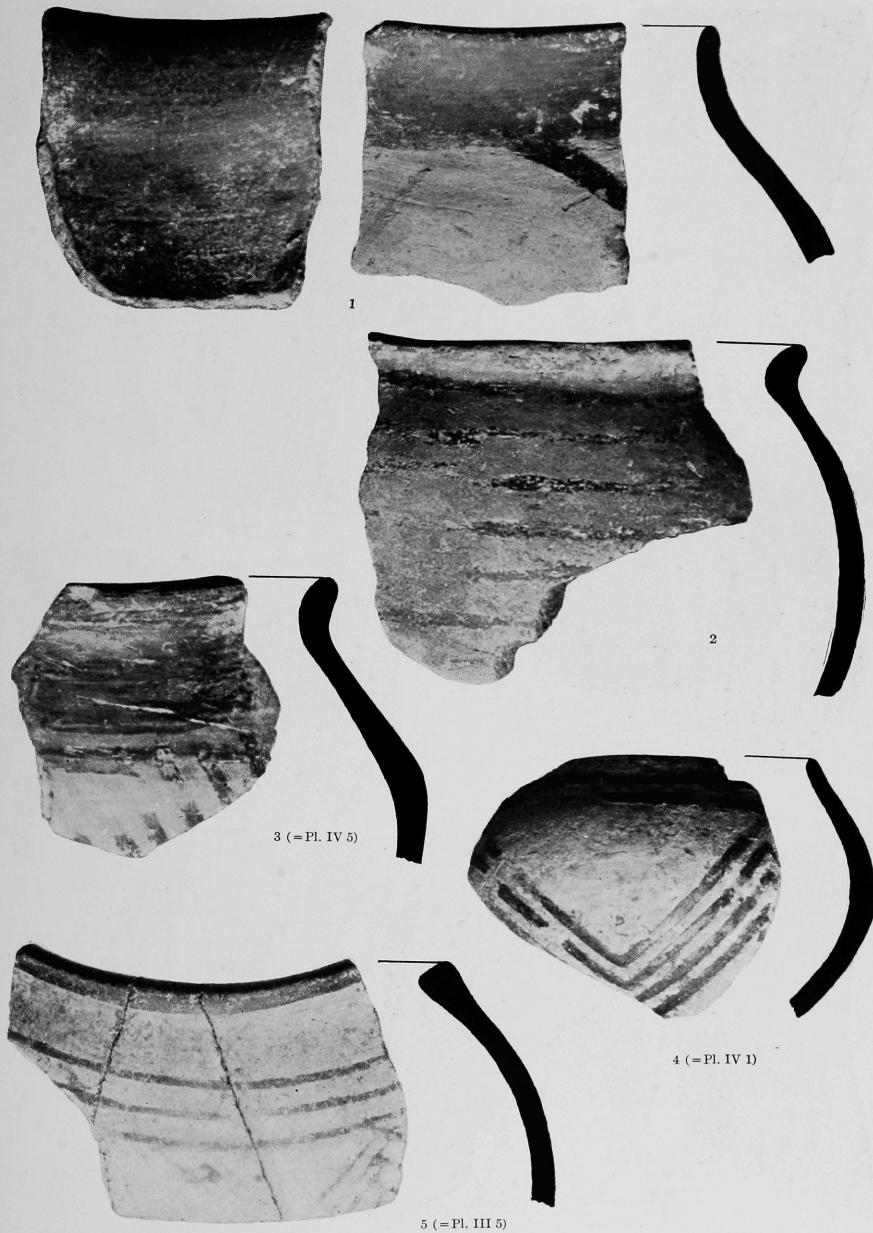


FIG. 163.—PAINTED SHERDS. ACTUAL SIZE

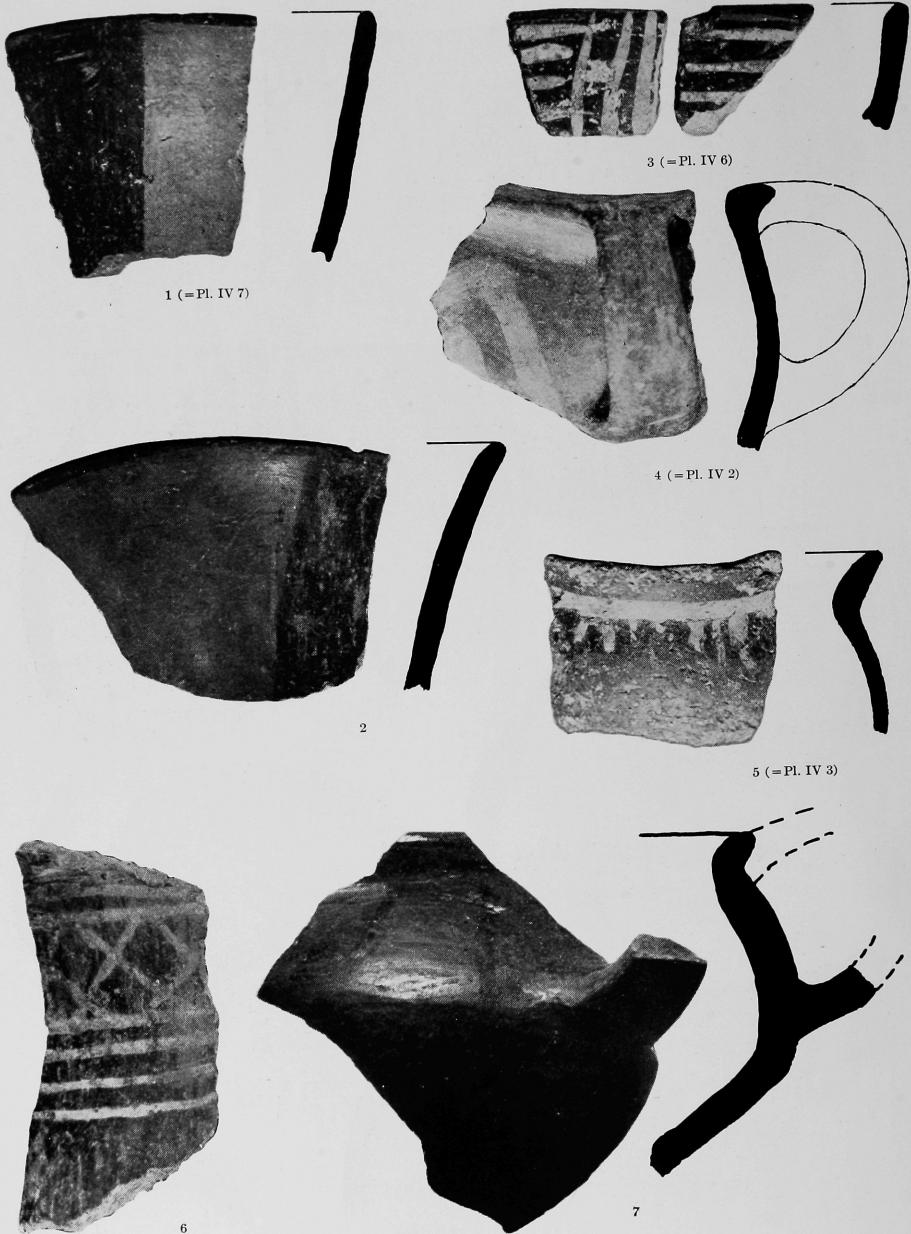


FIG. 164.—PAINTED SHERDS. ACTUAL SIZE

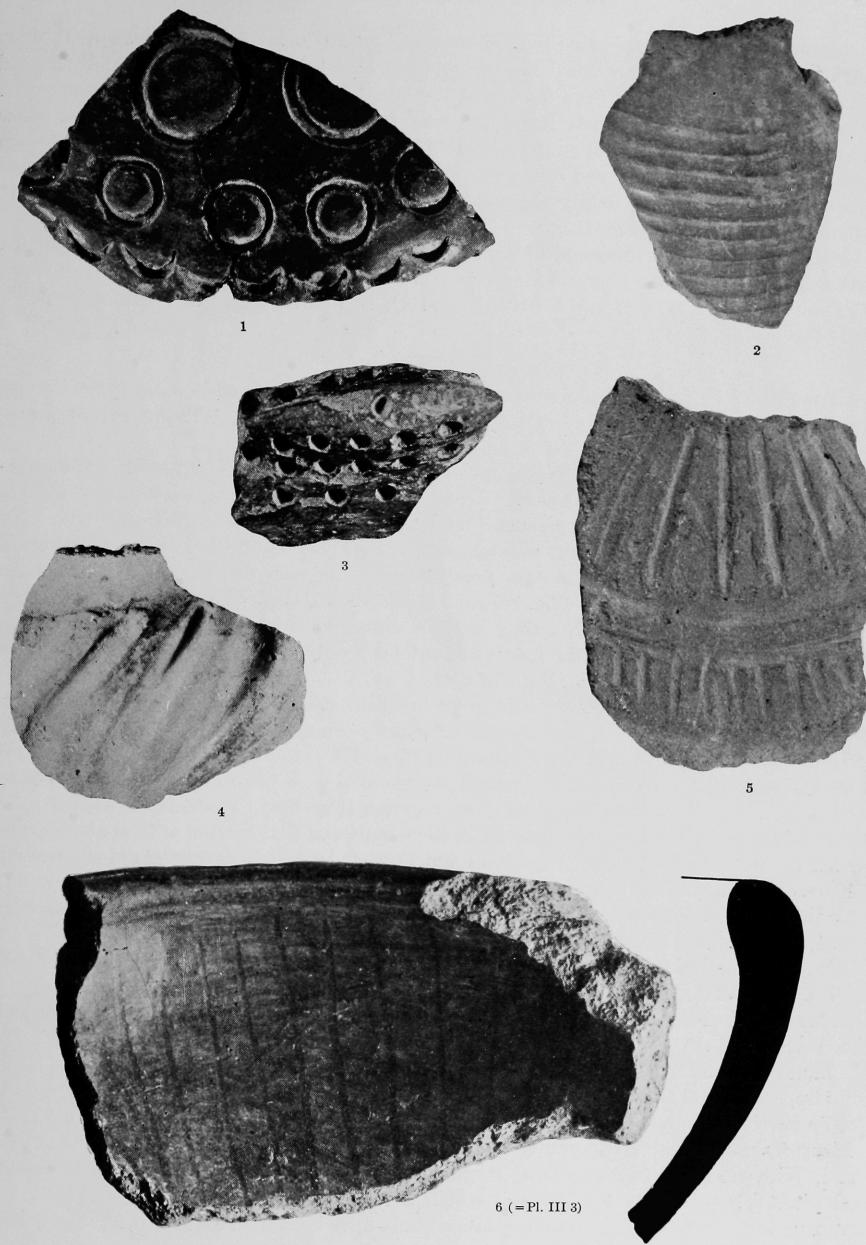


FIG. 165.—SHERDS VARIOUSLY ORNAMENTED. ACTUAL SIZE

Only one sherd with decorative burnishing was found (Pl. III 3 [=Fig. 165 6]). The slip seems first to have been burnished in a generally horizontal direction; then equally spaced vertical lines were burnished from the rim of the bowl, converging toward the bottom.

Incised sherds are rare. A few fragments were found which show roughly incised linear ornamentations (e.g., Figs. 161 1, 165 5, and 179 11). A sherd with a very fine dark brown finish showed incised circles and crescents (Fig. 165 1). Two flasks (b 2683 and b 130) had incised ornamentation. An oddly shaped fragment with a gray finish showed a roughly punctate ornamentation (Fig. 165 3).

Vertical, horizontal, or diagonal fluting or corrugation appears frequently on the smaller cups, usually those of finer paste and more careful execution (Pl. III 2 [=Fig. 166 3] and Figs. 165 2 and 4 and 166; cf. b 38 and b 101 in Pl. VIII). A jar with fluted decoration (b 455, Pl. VIII) was found in 1929.

FORMS

A bowl form with bottom rounded and rim rolled slightly inward is most typical of the Copper Age. A great variety of small cups, jars, and pitchers appears. With few exceptions the handle extends from lip to shoulder or median body.

Bowls predominate among the fragments and complete vessels (Figs. 167-68). The bottoms are rounded, sometimes slightly concave in the center; only rarely are flat bottoms found. The rims are mostly simple, but have a general tendency to curve inward (cf. Figs. 174-75). Contracted rims above sharp shoulders also appear (cf. Fig. 175) and later on become one of the typical forms of the Early Bronze Age. Small knobs at the edge of the rim serve as handles (cf. Fig. 178 1-17). Bowls e 1072 (Fig. 167) and b 135 (Pl. VIII) each have two lateral handles. The finish of the bowls is usually a thick red slip, either polished or burnished, over all; on a few pieces the red slip covered the inside and extended only a little way over the rim on the outside (e.g., e 1072, Fig. 167; cf. Fig. 161 3, 6).

Small cups with rounded bottoms and single handles extending from lip to median body or shoulder are frequent (Fig. 168). Sometimes the rim is an extension of the line of the body, but more often it is offset and rolls outward (cf. Figs. 176 1-45, 178 25-33, and 179 1-11 and 13). Often such cups are decorated on the outside by knobs (e.g., b 125 and b 884, Pl. VIII) or by vertical, diagonal, or horizontal fluting or corrugation (Fig. 166). The finish is usually a red slip over both inside and outside. Sometimes the handle and that portion of the outside under the handle are not slipped (e.g., Figs. 166 1 and 179 13). In several cases the red slip extends only over the rim, and the rest of the outside is decorated by red linear designs (Figs. 162-63).

To this group also belong small cups with lateral tubular spouts, probably for sucking (e.g., d 1331, Fig. 169; cf. Fig. 181 1-6).

Toward the end of this period small cups with high handles appear (e.g., d 2764, Fig. 168, and b 125, Pl. VIII).

In the latest building layer of the Copper Age two-handled cups or fragments of such vessels have been found (Pl. IV 7 [=Fig. 164 1], Fig. 164 2, and b 37, b 139, and b 332 in Pl. VIII). The handles extend from the bottom to a little below the rim. A painted band extends from lip to lip, crossing at the bottom another band which covers the outer surface of each handle. The lip itself is usually painted to match the bands.²²

Many fragments which apparently belong to pitchers such as No. d 2763 (Fig. 168) were found. With a few exceptions the finish is similar to that of the plain-ware cups. An interesting small pitcher, No. 3279 (Pl. VIII), found in 1927, was at that time incorrectly attributed to the Hittite period. Pitchers with tubular spouts seem to have been in use a long time. No. b 2733

²² *OIP* XIX 41-42.



FIG. 166.—FLUTED SHERDS. ACTUAL SIZE

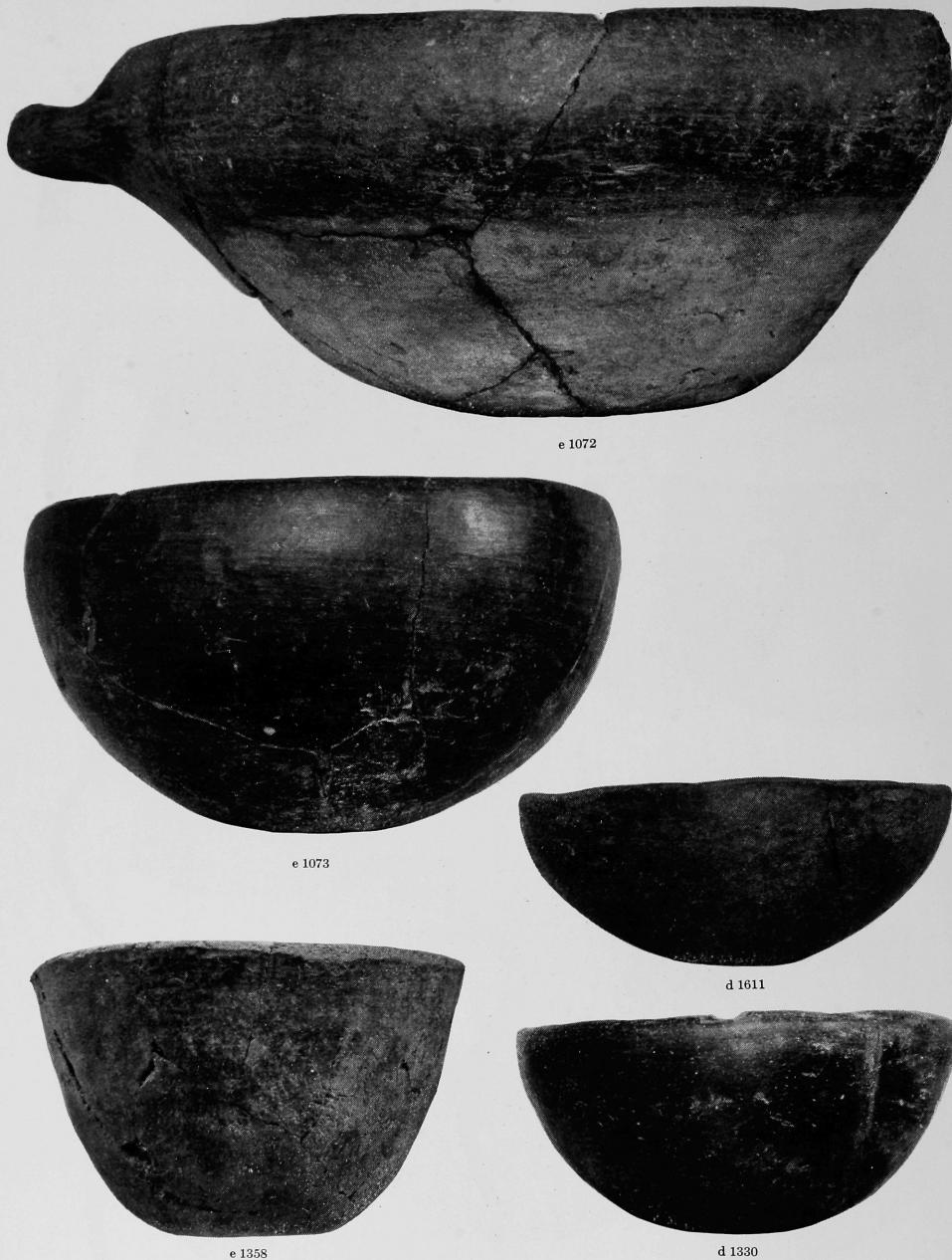


FIG. 167.—BOWLS. SCALE, 2:5

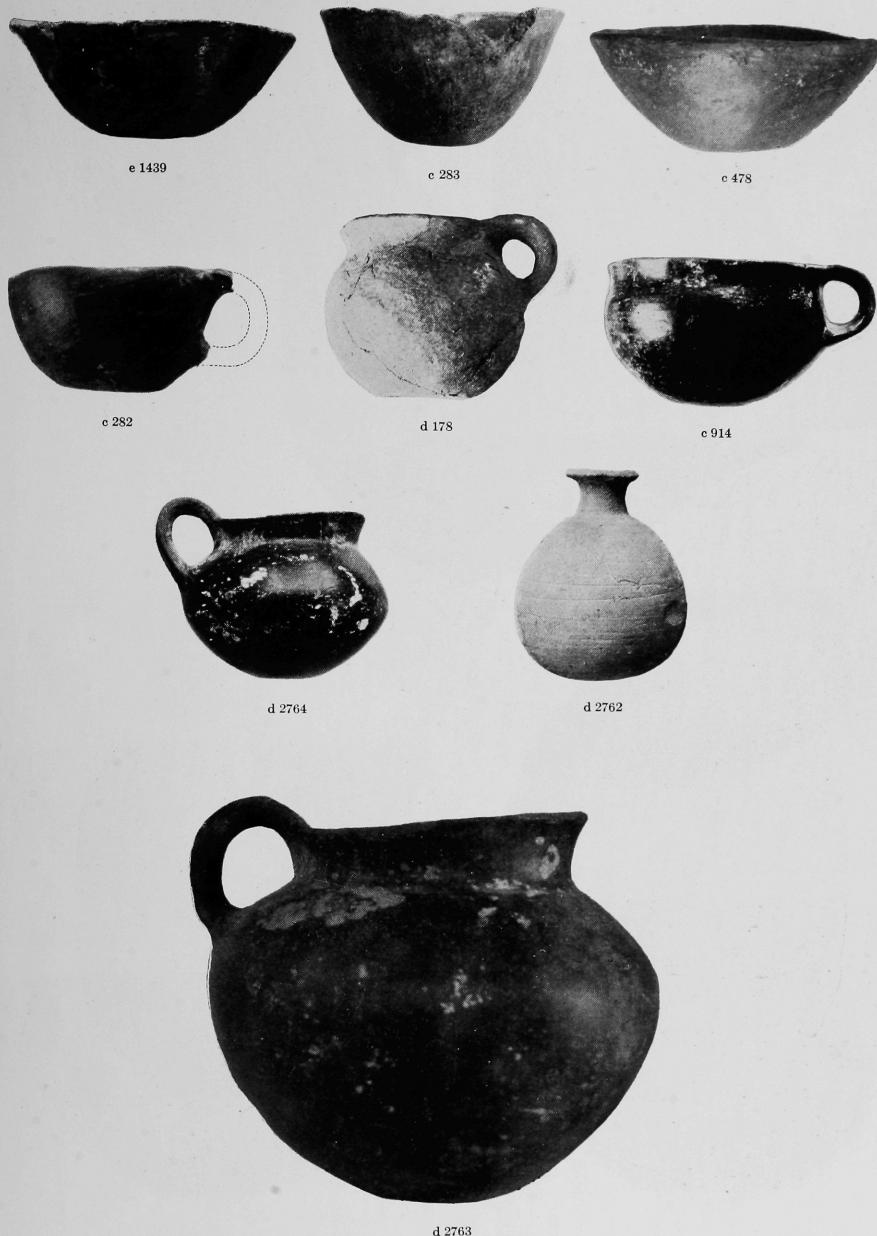
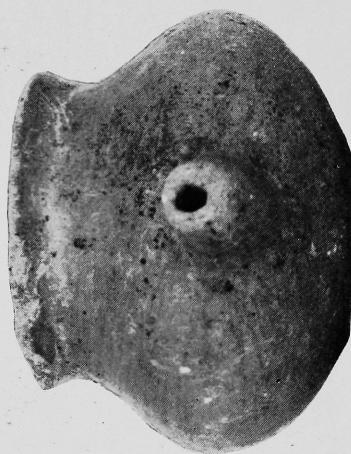


FIG. 168.—BOWLS, CUPS, A FLASK, AND A PITCHER. SCALE, 1:2



e 1621



d 1331

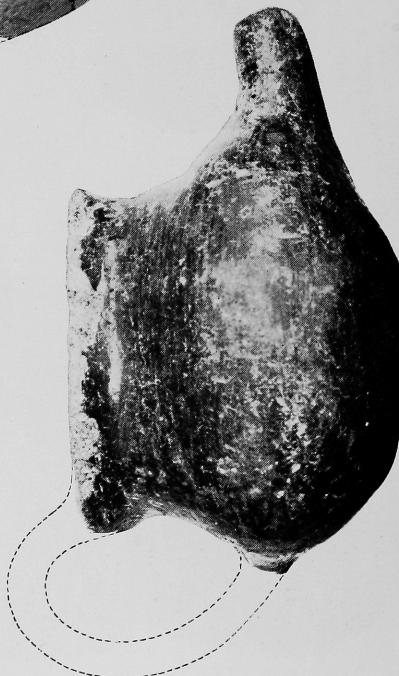


FIG. 169.—A SPOUTED CUP AND A JAR. ACTUAL SIZE

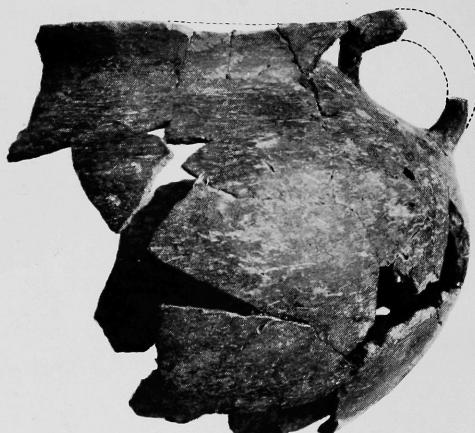


FIG. 170.—JARS. SCALE, 1:2

(Pl. VIII) is a crude example from the lowest Copper Age level in L 14-15. Two pitchers with similar spouts, found in the latest building level of the Copper Age in L 14-15, have painted ornamentation (a 1066 and b 331, Pl. VIII).



e 754



e 1075

FIG. 171.—JARS. SCALE, 2:5

The typical jar of this period has a slightly out-curved rim and one handle extending from lip to shoulder or median body (Figs. 170-71). Some handles show a roughly triangular cross-section; some are band handles. The bottoms are usually rounded. The finish of most of the jars corresponds to that of the plain-ware cups. Jar b 455 (Pl. VIII) is fluted. Jar e 1075, somewhat larger than the one-handled jars, apparently had two handles (Fig. 171). Jar e 1621 (Fig. 169), without handles, is similar in shape of body and rim to the one-handled jars. It has a yellowish brown slip, and the exterior is decorated with purplish brown diagonal bands.



e 686



e 1413

FIG. 172.—LARGE JARS. SCALE, ABOUT 1:10

A group of small flasks was found. Striations on the outside suggest that No. d 2762 (Fig. 168) might have been wheelmade. No. b 2683 (Pl. VIII) has two vertically perforated knob handles and incised ornamentation. No. b 130 (Pl. VIII) is decorated with incised lines and pairs of "breasts."

Many burial jars and other large vessels, or their fragments, were found (Fig. 172). Often these large vessels were much warped. The burial jars usually have flat bottoms and sharply cut-in rims. In one instance two small handles appear on the shoulder (see Fig. 157). Two jars each show a pair of "breasts" on the upper part (e.g., Fig. 173).

DETAILS

Most rims (Figs. 174-79) are simple; carinated rims are relatively rare. Bowl rims show a tendency to roll inward; the rims of cups and jars usually curve outward, and the neck is set off rather markedly.

Handles of cups and jars usually extend from lip to shoulder or median body (Figs. 178 18-33 and 179); toward the end of the Copper Age they occasionally rise higher than the level of the orifice. They are generally band-shaped, but some show triangular cross-sections.



FIG. 173.—FRAGMENT OF BURIAL JAR OF SKELETON 3206

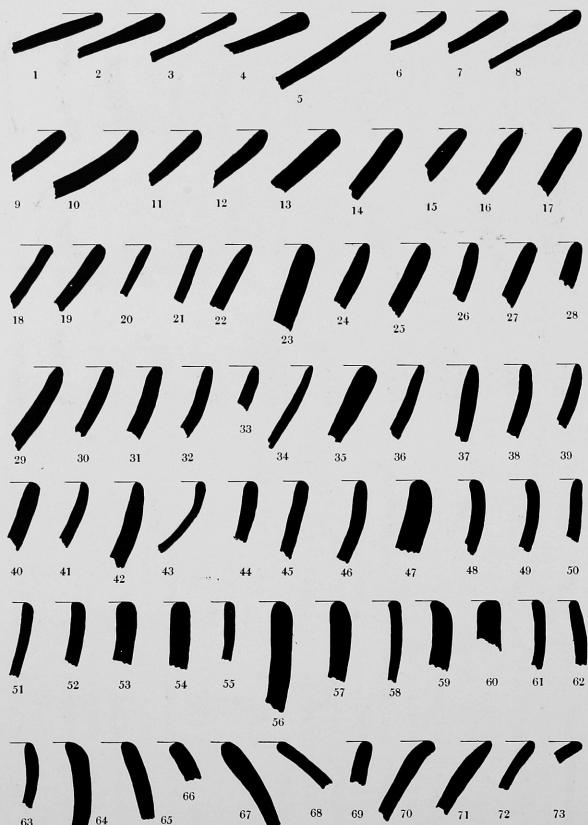


FIG. 174.—PROFILES OF RIM PIECES. SCALE, 1:3

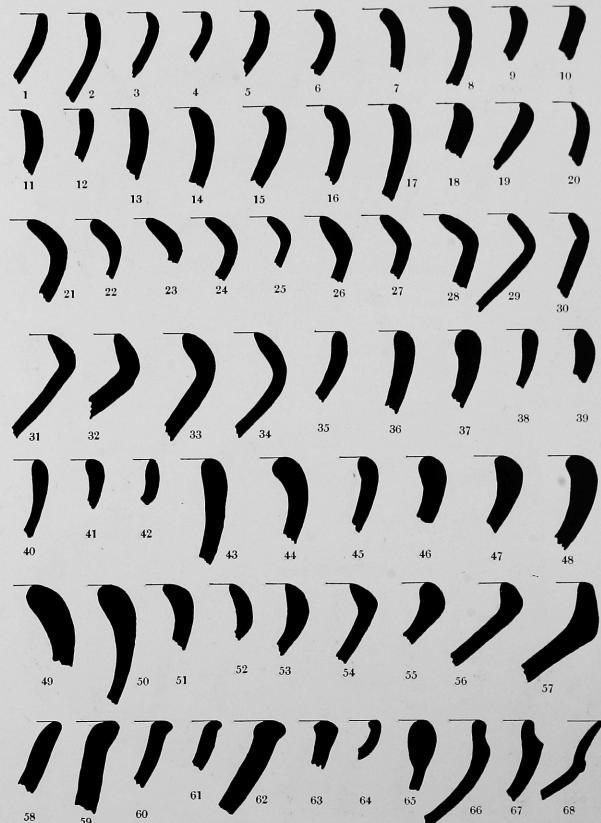


FIG. 175.—PROFILES OF RIM PIECES. SCALE, 1:3

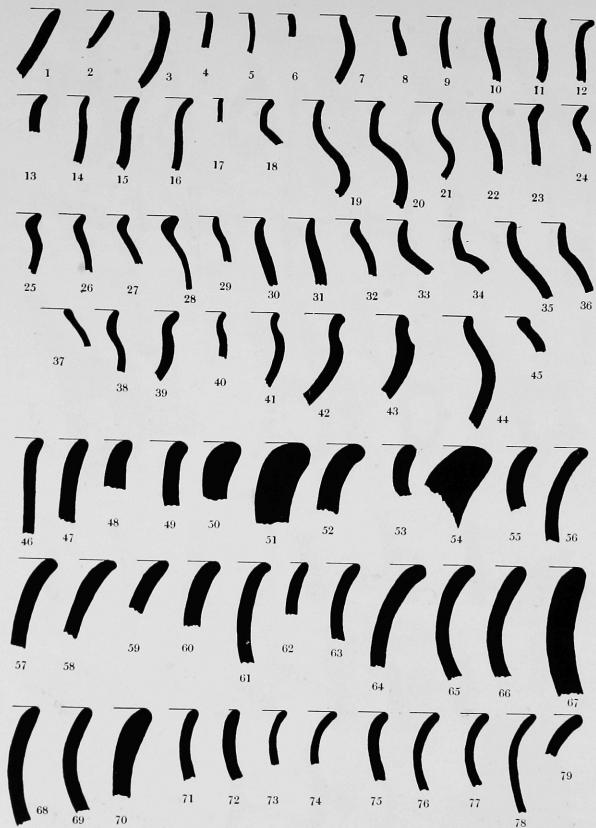


FIG. 176.—PROFILES OF RIM PIECES. SCALE, 1:3

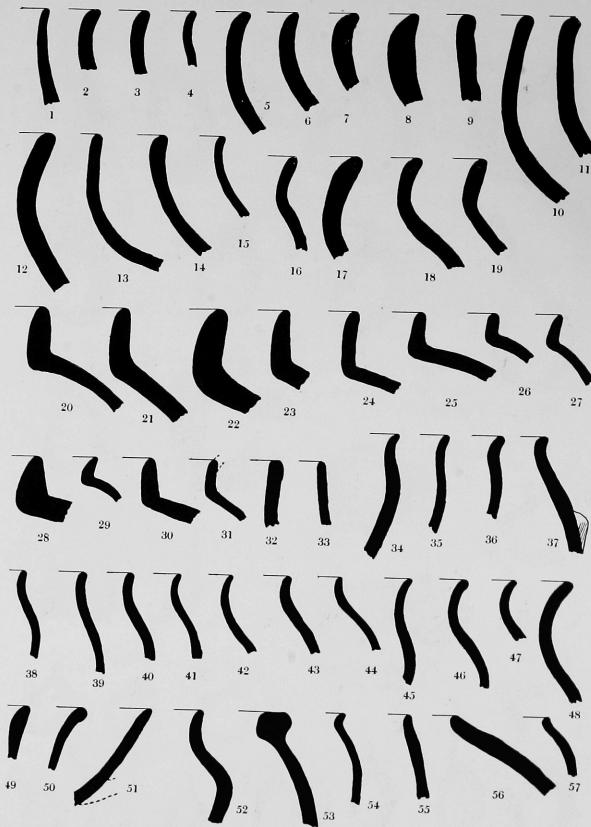


FIG. 177.—PROFILES OF RIM PIECES. SCALE, 1:3

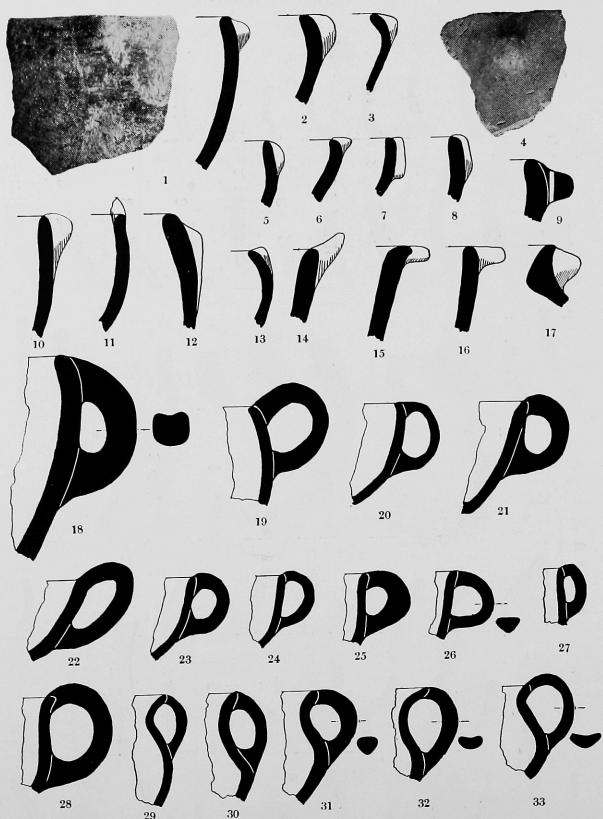


FIG. 178.—HANDLES. SCALE, 1:3

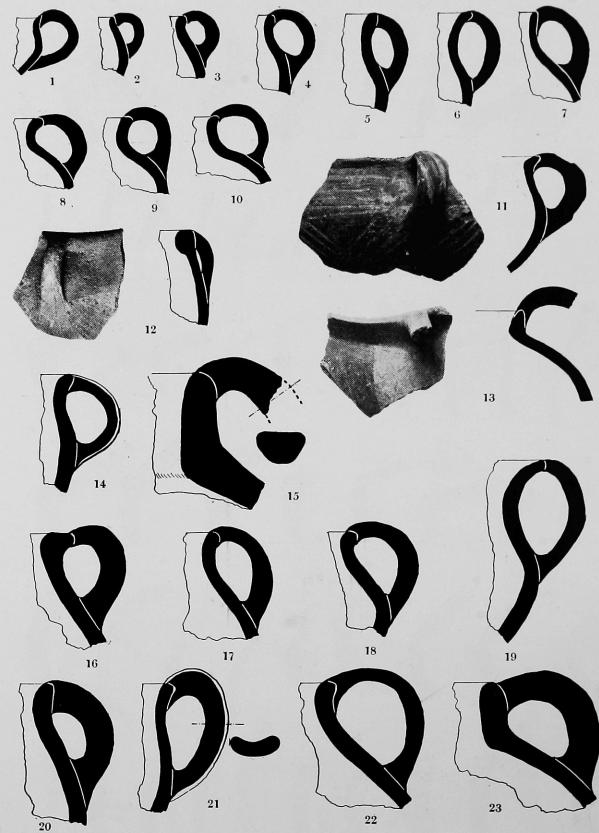


FIG. 179.—HANDLES. SCALE, 1:3



FIG. 180.—HANDLES AND HANDLE-SPOUTS. SCALE, 1:3

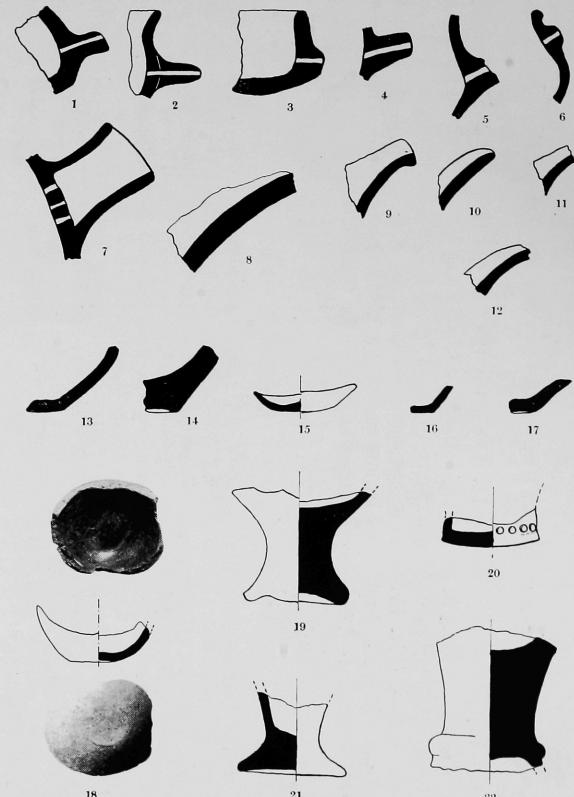


FIG. 181.—SPOUTS AND BOTTOM PIECES. SCALE, 1:3

Small knobs at the rims of bowls (Fig. 178 1-17) serve as handles. For relatively rare forms of handles see Figure 180.

The bottoms are usually rounded; less frequently they are flat (Fig. 181 13-18). Sometimes there is a small concavity in the center of the bottom. No cup-bases have been found so far in the Copper Age layers at Alışar. Figure 181 19-22 illustrates unusual forms.

Tubular spouts (Fig. 181 1-6) are frequent. Beak-spouts (Fig. 181 8-12) are rare. One strainer spout (Fig. 181 7) and three handle-spouts (Fig. 180 7-9) were found. There were also fragments of strainers. Lids show the same form as in the Chalcolithic age.

DESCRIPTIONS OF INDIVIDUAL VESSELS²³

- c 222 Pitcher(?), very fragmentary, .103 h., .099 d.; fine, plant-tempered, well made ware; buff paste with gray core; moderately fired; red slip over outside; polished. Found 18.20 deep, below a wall foundation in L 14. (Fig. 168 and Pl. VIII).
 c 282 Small cup with one handle, .042 h., .074 d.; medium, plant- and grit-tempered, well made ware; reddish buff paste; moderately fired; red slip over all; polished. Found 1.15 deep in J 22. (Fig. 168 and Pl. VIII).
 c 283 Small bowl .048 h., .087 d.; medium, plant-tempered, well made ware; buff paste; lightly fired; reddish buff slip over all; polished. Found 1.15 deep in J 22.
 c 478 (Fig. 168 and Pl. VIII). Small bowl .041 h., .105 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; red slip over all; polished. Found 1.15-2.00 deep in J 22.
 c 754 (Fig. 171 and Pl. VIII). Jar with one handle from rim to shoulder, .161 h., .174 d.; medium, plant-tempered, well made ware; buff paste; heavily fired; red slip on outside, continued inside rim. Found 6 meters deep in M 29.
 c 914 (Fig. 168 and Pl. VIII). Cup with one handle from rim to shoulder, .049 h., .080 d.; fine, plant- and grit-tempered, very well made ware; reddish paste with gray core; moderately fired; red slip over all; burnished. Found 4.20-4.80 deep in M 29.
 c 915 (Fig. 170 and Pl. VIII). Cup (or jar) with one handle extending from rim to median body, .075 h., .076 d.; medium, plant-tempered, poorly made ware; reddish buff paste; moderately fired; red slip on outside extending down rim on inside; polished. Found 4.20-4.80 deep in M 29.
 c 1413 (Fig. 172). Fragmentary storage vessel .700* h., .500 d.; very coarse, plant-tempered, fairly well made ware; reddish buff paste; moderately fired; grayish black slip on inside, buff slip on outside. Found 5.50 meters deep in a room in M 29.
 c 2457 (Fig. 170). Fragmentary jar .084* h., .115 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; red slip over all; polished. Found 6.30 deep in L 29.
 d 178 (Fig. 168 and Pl. VIII). Cup with one handle extending from rim to shoulder, .060 h., .068 d.; fine, plant-tempered, well made ware; buff paste; moderately fired; red slip over all; polished. Found 4 meters deep in I-J 28.
 d 1330 (Fig. 167 and Pl. VIII). Bowl with two diametrically opposed knobs on rim, .090 h., .193 d.; medium, plant-tempered, well made ware; buff paste with gray core; lightly fired; red slip with smoke stains over all; polished. Found 4.20 deep in I-J 28.
 d 1331 (Fig. 169 and Pl. VIII). Small cup with one handle and with tubular spout opposite handle, .060 h., .077 d.; medium, plant-tempered, very well made ware; buff paste; moderately fired; red slip over exterior, extending inside rim; burnished. Found 4.20 deep in I-J 28.
 d 1611 (Fig. 167 and Pl. VIII). Bowl .076 h., .185 d.; fine, plant-tempered, well made ware; buff paste with gray core; moderately fired; faded reddish wash over all; polished. Found 4.50-4.95 deep in U 30.
 d 2762 (Fig. 168 and Pl. VIII). Small flask .069 h., .058 d.; striations around exterior give the impression that the vessel might be wheelmade; fine, plant-tempered, very well made ware; buff paste; moderately fired; light reddish slip on outside; polished. Found as mortuary gift with skeleton d X46, 6.50 deep in T 29.
 d 2763 (Fig. 168 and Pl. VIII). Pitcher .135 h., .159 d.; fine, plant-tempered, very well made ware; buff paste with gray core; moderately fired; red slip on outside, extending over rim; polished. Found with cup d 2764

²³ Only vessels found from 1930 to 1932 are enumerated here. Vessels of the Copper Age found in previous seasons are described in *OIP* VI 275-76 and *OIP* XIX 42-47. Drawings of typical forms from the excavations of 1927-32 are given in Pl. VIII. As Copper Age layers were struck in many different parts of the site, an enumeration by levels would be of no great use.

- as a mortuary gift of skeleton d X47, 6.55 deep in T 29. These two vessels are the best examples of Copper Age ware found at Alisar.
- d 2764 (Fig. 168 and Pl. VIII). Cup with high handle extending from rim to shoulder, .055 h., .071 d.; fine, plant-tempered, very well made ware; buff paste; moderately fired; red slip on outside, extending over rim; polished. Found with pitcher d 2763 as a mortuary gift of skeleton d X47, 6.55 deep in T 29.
- d 2828 (Fig. 170 and Pl. VIII). Jar .077 h., .104 d.; medium, plant-tempered, well made ware; buff paste with gray core; moderately fired; red slip on outside, extending over rim; burnished. Found 6.90 deep in U 27.
- e 279 (Fig. 170 and Pl. VIII). Jar .085 h., .114 d.; medium, plant-tempered, fairly well made ware; buff paste; moderately fired; thin red slip on exterior, extending over rim; slightly polished. Found 3.30 deep in Z 26.
- e 686 (Fig. 172 and Pl. VIII). Large jar .860 h., .800 d.; very coarse, plant-tempered, well made ware; buff paste with gray core; heavily fired; reddish brown slip covers entire exterior and extends over rim; polished. Burial jar of skeleton e X8, found 3.80 deep in Z 27.
- e 1072 (Fig. 167 and Pl. VIII). Large bowl with two handles, .180 h., .390 d.; medium, plant-tempered, well made ware; buff paste with thick gray core; moderately fired; red slip over interior, extending to base of handles on exterior; the slip from base of handles to bottom outside has become a reddish buff through firing; polished. Found 13.90 deep in L 15-16.
- e 1073 (Fig. 167 and Pl. VIII). Large bowl .160 h., .275 d.; coarse, plant-tempered, very well made ware; buff paste with gray core; moderately fired; rich red slip of varying shades over exterior and interior; burnished. Found 13.90 deep in L 15-16.
- e 1074 (Fig. 170 and Pl. VIII). Jar or pitcher .084 h., .106 d.; coarse, plant-tempered, fairly well made ware; buff paste; moderately fired; remains of red slip over all. Found 14.30 deep in L 15.
- e 1075 (Fig. 171 and Pl. VIII). Jar, apparently with two handles; medium, plant-tempered, well made ware; buff paste; moderately fired; red slip over all; burnished. Found 14.70 deep in L 15.
- e 1348 (Fig. 170). Jar .095 h., .105 d.; medium, plant-tempered, fairly well made ware; buff paste; heavily fired; traces of reddish wash. Found in dump soil of L 15-16.
- e 1358 (Fig. 167 and Pl. VIII). Bowl .100 h., .177 d.; coarse, plant-tempered, very well made ware; buff paste with gray core; moderately fired; rich red slip of varying shades over all; burnished. Found 14.70 deep in L 15.
- e 1439 (Fig. 168 and Pl. VIII). Small bowl .039 h., .094 d.; fine, plant-tempered, fairly well made ware; buff paste; moderately fired; red slip over all; burnished. Found 16.50 deep in L 15.
- e 1440 (Fig. 170 and Pl. VIII). Jar .100 h., .102 d.; medium, plant-tempered, fairly well made ware; buff paste with gray core; moderately fired; reddish slip on outside, extending over rim; polished. Found 16.50 deep in L 15.
- e 1614 (Pl. VIII). Jar .096 h., .101 d.; coarse, plant-tempered, fairly well made ware; buff paste; moderately fired; red slip over all; polished. Found 17.50 deep in L 15.
- e 1621 (Fig. 169 and Pl. VIII). Handleless jar or large cup .120 h.; fine, plant-tempered, well made ware; buff paste; moderately fired; yellowish brown slip over all, with purplish brown diagonal bands over exterior. Found 18 meters deep in L 15.

Pottery figurines are described below; minor pottery objects, including "whorls," are described on pages 198-207. For analyses of pottery see *OIP XXX* 336 f.

FIGURINES

Most of the human figurines of the Copper Age (Figs. 182-83) are of two classes. A typical form is the so-called "Scheibenidol." The body is represented by a flat disk and the neck and head by a conical protuberance. The material is usually pottery (e 2224, e 595, e 1252, e 510, e 2113, d 1511, d 1722), but two such idols (e 721 and e 805) are of alabaster. Several pottery idols of this type have incised ornamentation. No. d 1511 shows two diagonally crossed lines with a depression at their intersection; unevenly distributed dots cover the remaining surface. The "neck" and "head" are broken off, but this object is very similar to No. b 103,^{23a} found complete in 1929. On No. e 2113 there are two crossed bands of finger-nail impressions. No. d 1722, which is very fragmentary, shows indication of the female sex organs.

^{23a} *OIP XIX*, Fig. 62.

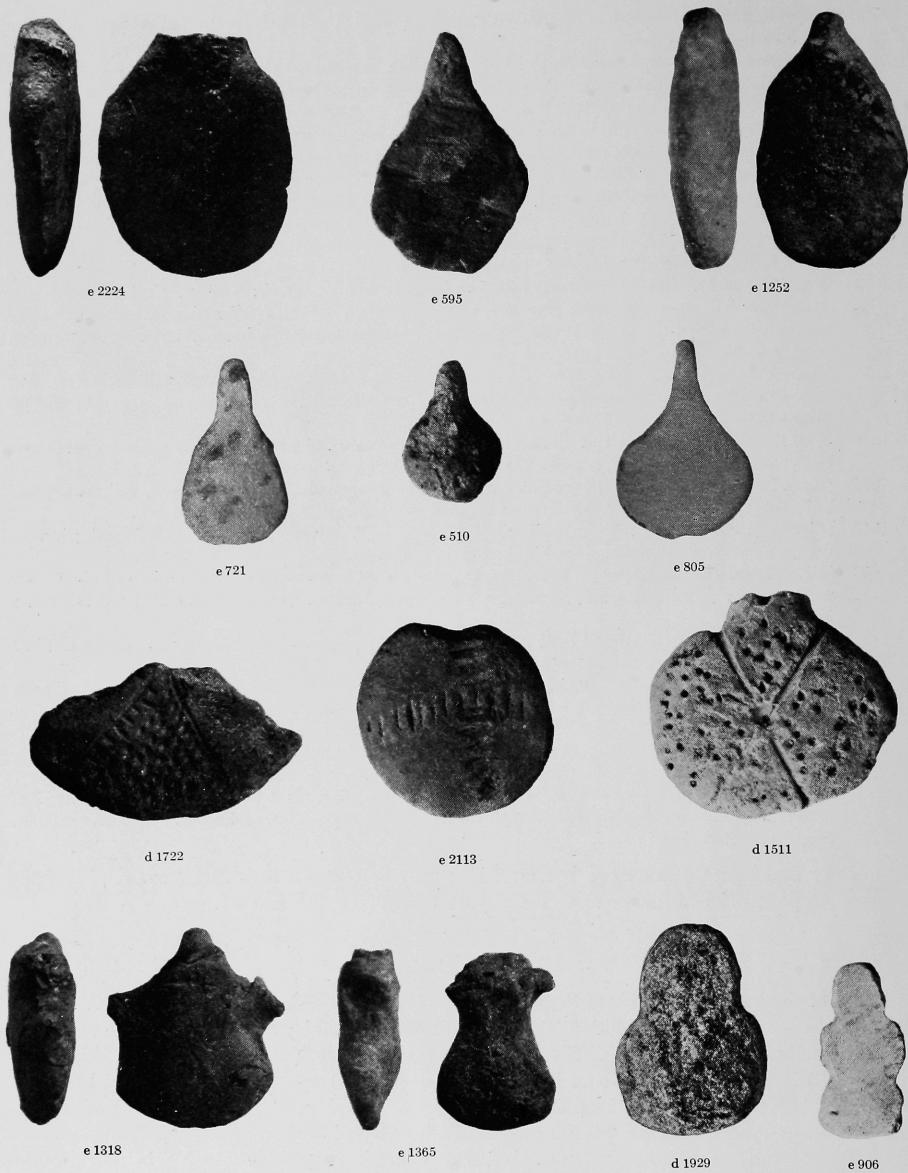


FIG. 182.—HUMAN FIGURINES. ACTUAL SIZE

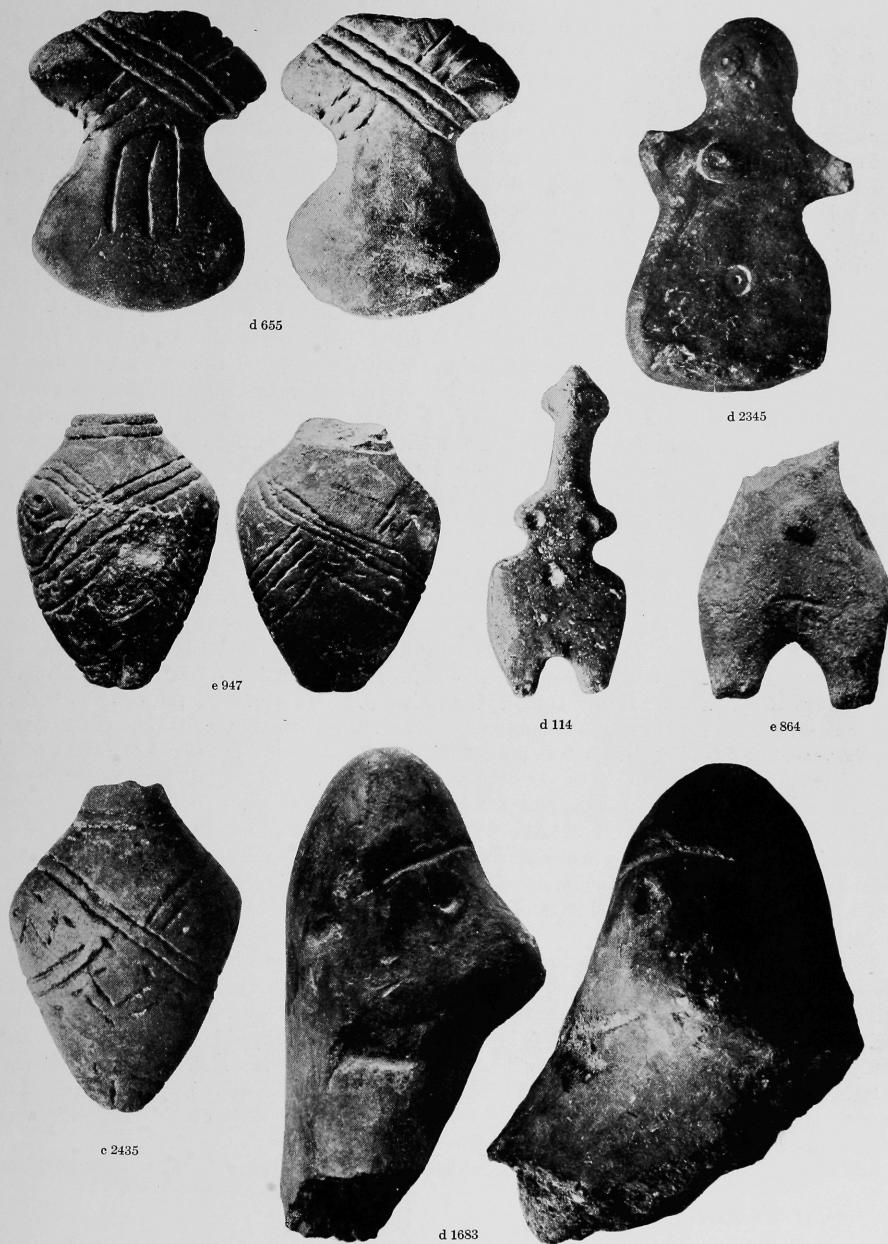


FIG. 183.—HUMAN FIGURINES. ACTUAL SIZE

A second type is the so-called "Geigenidol." With one exception, all the specimens found were of pottery. Besides a sketchy indication of head and neck, these idols have stumps for arms and a body constriction suggesting the waist (e.g., e 1318, e 1365, and d 655). Again incised ornamentations are found on some of them. No. e 906 is a "Geigenidol" made by regrinding a potsherd, and No. d 1929 is one crudely fashioned from a piece of gneiss. No. d 2345 belongs to this class but is more elaborate; it had two breasts in relief (one now missing), a carefully indicated navel, and a head with eyes and a nose. The legs of Nos. d 114 and e 864 are indicated by stumps. Evidently the female figures e 947 and c 2435 were rattles. The pottery head d 1683, with a pronounced nose, perhaps belonged to a large figure or idol, but more probably it is the upper part of an andiron or spit-support (cf. e 1732, Fig. 100).

Of the twenty human figurines of this period found in 1930-32, eight were in pure Copper Age layers (d 655 in W 24; d 1929 in T 31; e 510, e 595, e 721, e 805, and e 906 in L 15-16; and e 947 in FF 3-4); three (d 1511, d 1683, d 1722) were in the destruction layer below Level 6 M in O 11, where Copper Age and Early Bronze Age remains were mixed; six were in mixed layers of the Copper Age and the Hittite period, in which Copper Age ware predominated (c 2435 in BB 24; d 114 in I-J 28; d 2345 in L 34, below the deposit of the Hittite Empires; and e 1252, e 1318, and e 1365 in W 2-3, below the foundation of the Hittite outer defense wall). No. e 2224 was found in M 11 in the pure Early Bronze Age layer (Level 6 M) following the Copper Age deposit on the citadel mound (cf. p. 261). No. e 2113 was found in L 12 in the second building level (5 M) of the Early Bronze Age. No. e 864 was recovered in dump soil.

The animal figurines shown in Figure 184 are typical of the Copper Age. They are usually of serpentine but sometimes of diorite. These figurines are flat and rather conventionalized. Sometimes the legs are simply indicated by small stumps, sometimes not at all. Perforations occur on all of them, mostly at the places where the legs should join the trunk. A third perforation, representing an eye, is common. Each of three figurines (c 230, d 260, and d 2522) has a single perforation through the neck, and another (e 2259) is pierced through the body. Parallel incised lines or chevrons perhaps represent hair or fur. Of the ten figurines of this type found from 1930 to 1932, Nos. d 260 and d 2522 may be identified as dogs; No. c 1269, as a rabbit; and Nos. c 230 and e 2259, possibly as pigs. The remaining figurines may have been intended for sheep. Five of the ten figurines found in 1930-32 were in pure Copper Age layers (c 230 in M 29, c 2367 in U 24, d 2522 in U 28, e 852 in L 15-16, and e 1836 in BB 26). In a mixed layer of Copper Age remains and the first monochrome wheelmade ware, below the foundation of the oldest building layer of the Hittite period, four pieces were found (c 635 in J 29, c 1269 in J 31, d 260 in I-J 28, and e 353 in S 20). No. e 2259 was found in N 12 in Level 5 M, an Early Bronze Age layer.

Several such stone figurines had been found in 1929.²⁴ No. b 805 had, besides the perforations, six depressions—three on each side—which were inlaid with a grayish white chalky material. No. b 44 seems to represent the head of a dog; the eyes and several depressions are inlaid with white material of some sort. The fact that the back of the head is scooped out, leaving only a thin wall in some places, makes it probable that the body to which this head had been attached was of some different, perishable material. No. b 1580 seems to be part of a pedestal upon which is the posterior part of a crouching animal. Either the object had been broken and reground or the anterior part consisted of different material.

Pottery figurines of animals (Fig. 185) which strongly resemble those of the Chalcolithic

²⁴ See *OIP* XIX 53-55.

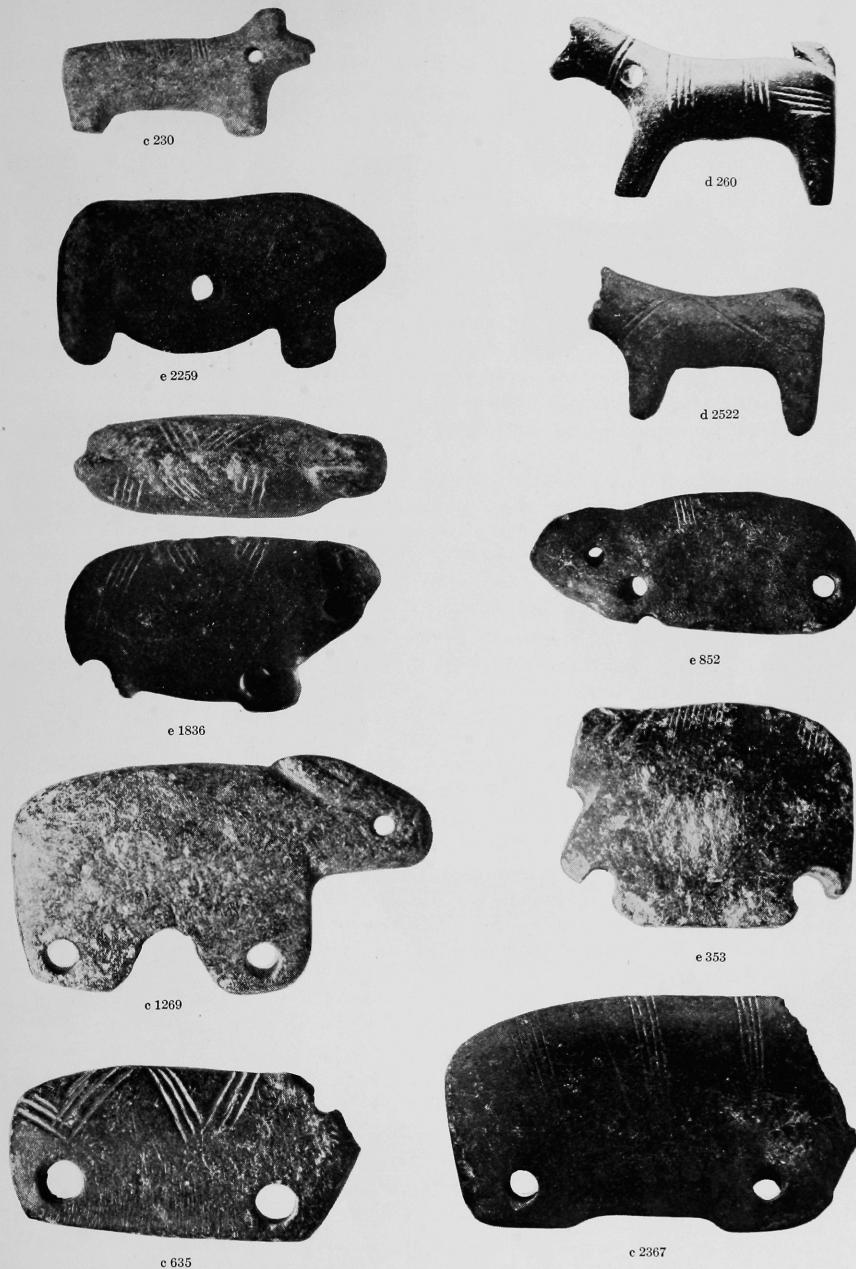


FIG. 184.—ANIMAL FIGURINES OF STONE. ACTUAL SIZE

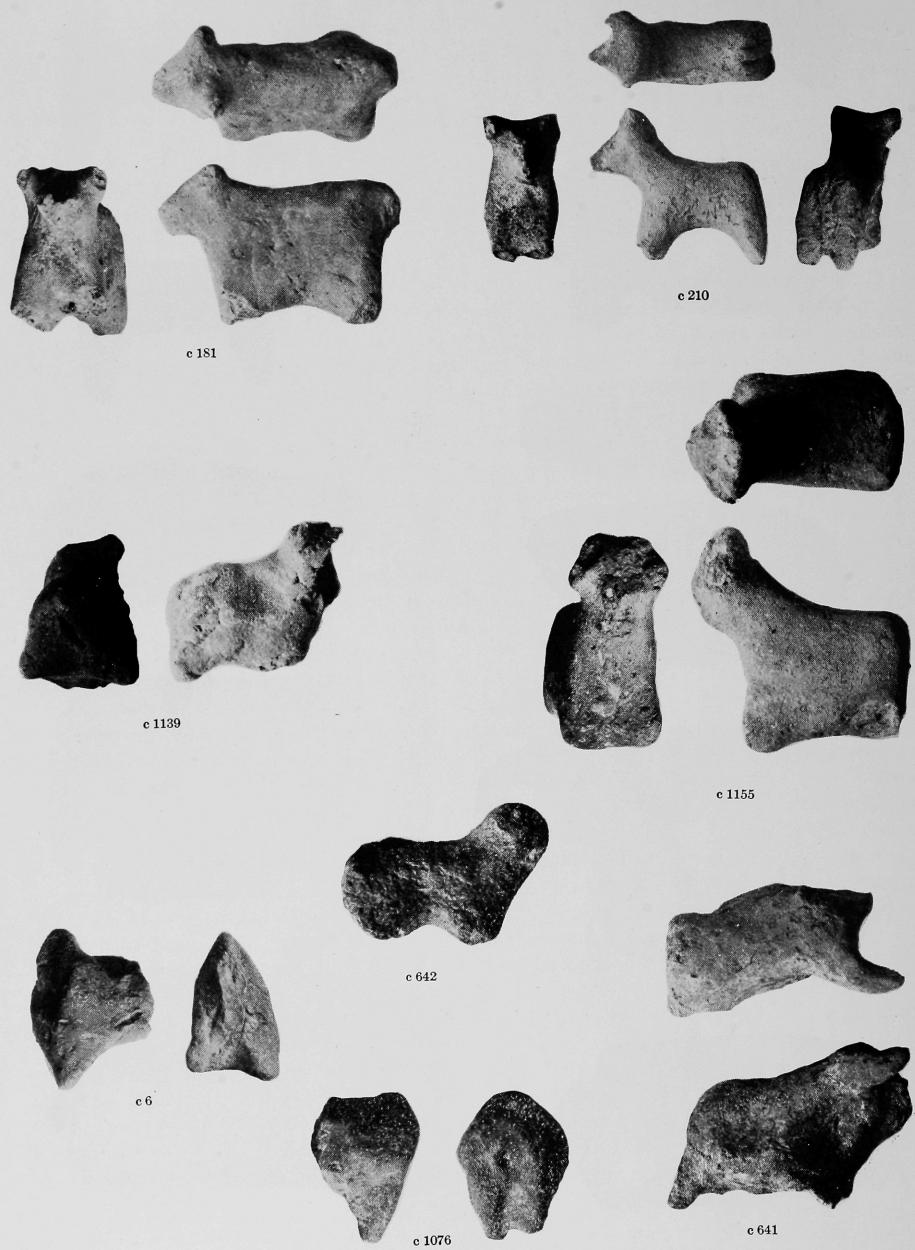


FIG. 185.—ANIMAL FIGURINES OF POTTERY. ACTUAL SIZE

age were found in great numbers. Again the bodies are usually block-shaped, but the legs are formed a little better than in the previous period. Most of these figurines probably represent sheep. No. c 641 is bovine, and No. c 6 is perhaps the hind part of a goat.

SEALS

The majority of the glyptic objects found in the culture deposits of the Copper Age are stamp seals (Fig. 186). In addition one impression of a stamp seal and one cylinder seal were found.

The stamp seals are either of copper or bronze or of stone (serpentine or diorite). The metal stamp seals (c 740, d 2861, and d 658) consist of round or oval bases with short tapering handles which probably were perforated near the top. Their bases were so badly corroded that little could be recognized. Nevertheless, No. c 740 shows a cross-shaped design composed of four groups of right angles symmetrically incised upon the base, a motive well known from the Chalcolithic seals.

The stone stamp seals may be divided into two principal groups. The first group resembles in shape the metal stamp seals. The base, often slightly convex, is rectangular (usually with rounded corners) or circular. The motives on Nos. e 119, e 456, and d 2385 are characterized by intersecting lines connecting the corners of the base; each quadrant is filled with incised angles.^{24a} The bases of Nos. e 394 and e 560 are divided into quadrants by intersecting lines extending to the midpoints of the sides. On No. e 560 the diagonally opposite quadrants are alike. No. e 394 is too badly worn to show much of its design. On the round base of No. c 307 are five parallel lines crossed at right angles by four lines.

Stone stamps of the second group are characterized by domed or gable-shaped backs. They are perforated parallel to the base. No. c 1225 has a rectangular base with rounded corners and a low gable-shaped back; the base displays a walking stag in front of which is a tree or branch. Nos. c 1839 and e 728 have domed backs and oval bases. The former portrays a running horned animal and several indeterminable fill designs. The design of No. e 728 consists of two columns of short, considerably curved arcs and a T-shaped motive. No. c 1506, of which only a small fragment is preserved, apparently had a round or oval base with a geometrical design.

Cylinder seal e 455, of diorite, shows a carefully and deeply cut geometrical design. The lower part of the cylinder is broken off.

No. e 824 is a fragment of a "label" with an impression of a circular stamp seal. Two crossed lines form quadrants containing apparently symmetrical designs within a linear border.

Of the fifteen glyptic objects of this period found in 1930-32, three came from Copper Age levels on the citadel mound (e 455-56 in Level 8 and e 824 in Level 10 in L 15-16) and three from pure Copper Age deposits on the terrace (c 307 in M 29, d 658 in W 24, and e 119 in Z 26). From below the foundations of the earliest building level of the Hittite period, in refuse layers containing both Copper Age pottery and monochrome wheelmade ware, came six pieces (c 1225 and c 1506 from below the foundation of the southern gateway in J 35 and M 34; d 2385 from T 29; d 2861 from P 27; and e 394 from S 21 and e 560 from DD-FF 13, in which plots a strong admixture of the typical Early Bronze Age ware also appeared). No. c 740 was found in J 25 in a refuse layer where Copper Age ware and Early Bronze Age ware were mingled. No.

^{24a} No. e 2203 (*OIP* XXIX 418 and 423) has a similar design, but each of its quadrants is decorated with several lines perpendicular to the sides of the square. Since it was found in refuse of Level 4c M and since the form of the seal is typical of the Copper Age, it may have originated in the Copper Age or the Early Bronze Age.



FIG. 186.—SEALS AND AN IMPRESSION. ACTUAL SIZE

c 1839 from L 12 was found in Level 5 M, an Early Bronze Age layer. No. e 728 was found in R 26 in a badly disturbed refuse layer of the earliest Hittite building period.

In addition several complete but corroded metal stamps similar to No. d 2861 came from distinctly Copper Age levels.

STONE OBJECTS

The stone objects of the Copper Age show relatively few new forms, and those which appear here persist, with few exceptions, through all the later periods. Only one type would I designate as characteristic of this period: the serpentine "whorls" with round, oval, or truncated biconical cross-section and incised linear ornamentation. Even these appear in large quantities later, especially in the culture deposit of the Hittite period.

Blades, scrapers, cores, and flakes of chalcedony, flint, and obsidian have the same forms as those of the Chalcolithic age (e.g., c 913 and e 415, Fig. 192). Maceheads (e.g., d 1327, c 1004, e 469, e 752, e 1100, and e 468, Fig. 187) are made mostly of diorite, although serpentine and marble also appear. There are no new forms.

The earliest specimens of the trapezoidal flat ax with one cutting edge found at the Alışar site were uncovered in the Copper Age deposit (e.g., e 413, Fig. 187). In this type the one cutting edge is slightly off center. With very few minor modifications this type of ax is found in all the later cultural deposits. Diorite and serpentine are predominantly used as material. Such axes were found in 1929 also; No. b 2728 has a perforation near its blunt end.²⁵ Relatively frequent were hammers with an all-around groove (e.g., e 410, Fig. 187). Another type, that of Nos. e 928 and e 899 in Figure 187, also appears frequently. The hammer axes (e.g., e 464, e 929, e 467, and e 803, Fig. 187) show many forms, but no complete specimen has been found. Materials are diorite, granite, and serpentine.

A great many serpentine "whorls" of various sizes were found in the deposits of the Copper Age (Figs. 188-91). Although they appear frequently in the deposits of the Hittite Empires also, I am inclined to attribute them in general to the Copper Age. The varying sizes of such objects, the largest one²⁶ being .061 and the smallest one (d 2759, Fig. 189) .014, make it improbable that they were all used in spinning. Nevertheless, some of them may have been real spindle whorls. The cross-sections vary from round through oval to discoid (Fig. 190). A few are truncated biconical. They are either plain (Fig. 188, top) or ornamented; only the latter are typical. A cross-shaped design of finely incised lines (Fig. 191) is the most common. During 1930-32 sixty-one serpentine "whorls" with incised ornamentation were found.

FIND-SPOTS OF ORNAMENTED SERPENTINE "WHORLS"

In Copper Age deposits: c 1545 (Fig. 188) and c 1602 in J 27; c 223 in L 14; e 523-25, e 528, e 649-50, e 657-58, e 704 (Fig. 189), e 706 (Fig. 188), e 708 (Fig. 188), e 709 (Fig. 189), e 756, e 796-97 (Fig. 189), e 829-31 (Fig. 189), and e 856 in L 15-16; c 1003 in M 29; d 2759 (Fig. 189) in T 28; d 2485 (Fig. 189) in T 30; d 1674 (Fig. 189) and d 2656 (Fig. 189) in U 30

In a Copper-Early Bronze refuse layer: c 1119 (Fig. 188) in B 24; e 409 (Fig. 189) in HH 13

Below the foundations of the earliest Hittite level: c 257 (Fig. 188) and c 637 in J 29; c 158 in a mixed refuse layer in J 30; e 2 (Fig. 189) in P 31; d 1607 (Fig. 189) and d 2698-99 (Fig. 189) in T 30; d 2603 (Fig. 189) in U 29; d 802 (Fig. 189) in U 30

Near the foundation of the outer defense wall of the Hittite Empires: c 1184 (Fig. 188) below the southern gateway in K 34; e 273 (Fig. 189) in DD 25; e 985 (Fig. 189), e 1053 (Fig. 189), and e 1088 (Fig. 189) in FF 3-4; e 1103-4 (Fig. 189) in VV 24; c 1713 (Fig. 188) near the postern; e 861 (Fig. 189) and e 943 (Fig. 189)

²⁵ *OIP XIX*, Fig. 74. No. b 2278, of somewhat similar shape but with a large perforation, was, as Dr. Schmidt says, apparently meant only as a pendant.

²⁶ Found in a burial in 1927. See *OIP VII*, Fig. 10.

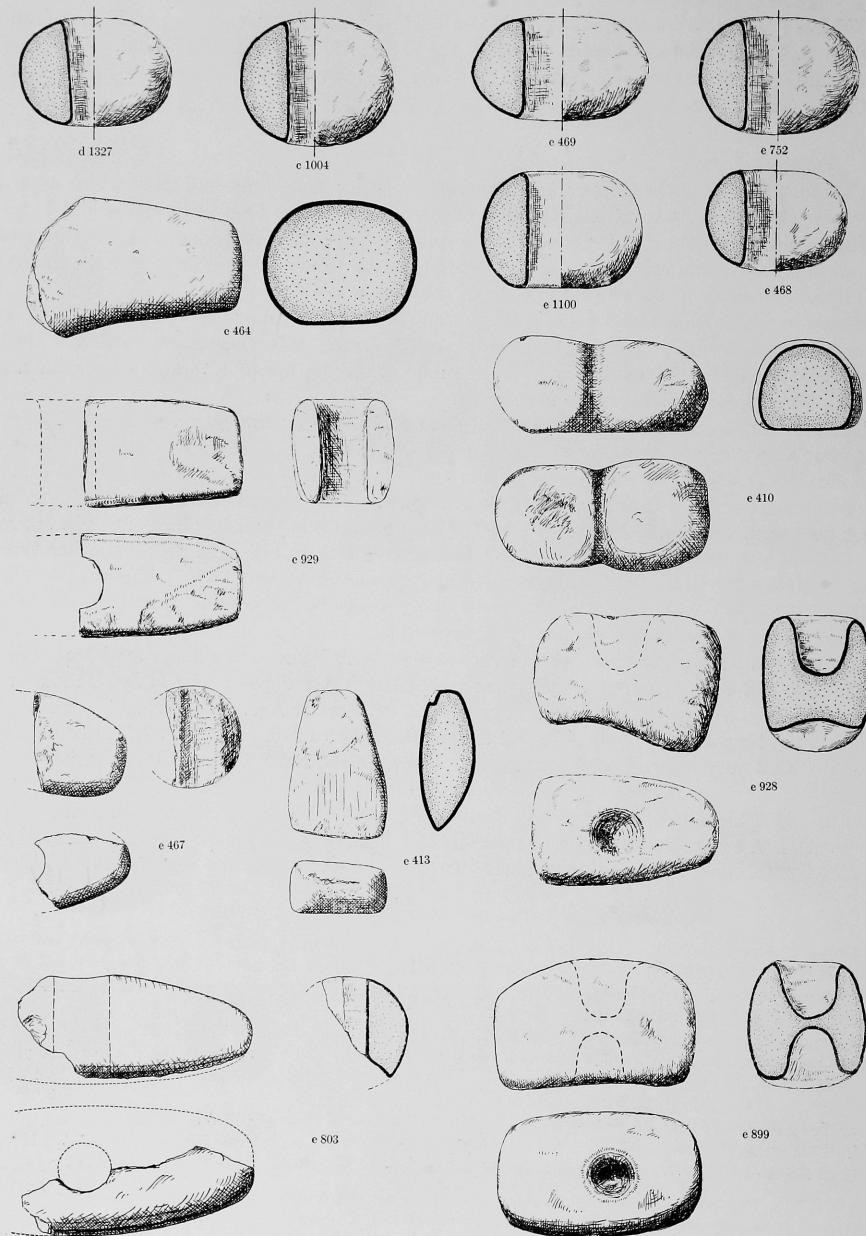


FIG. 187.—MACEHEADS AND HAMMER AXES. SCALE, 1:2

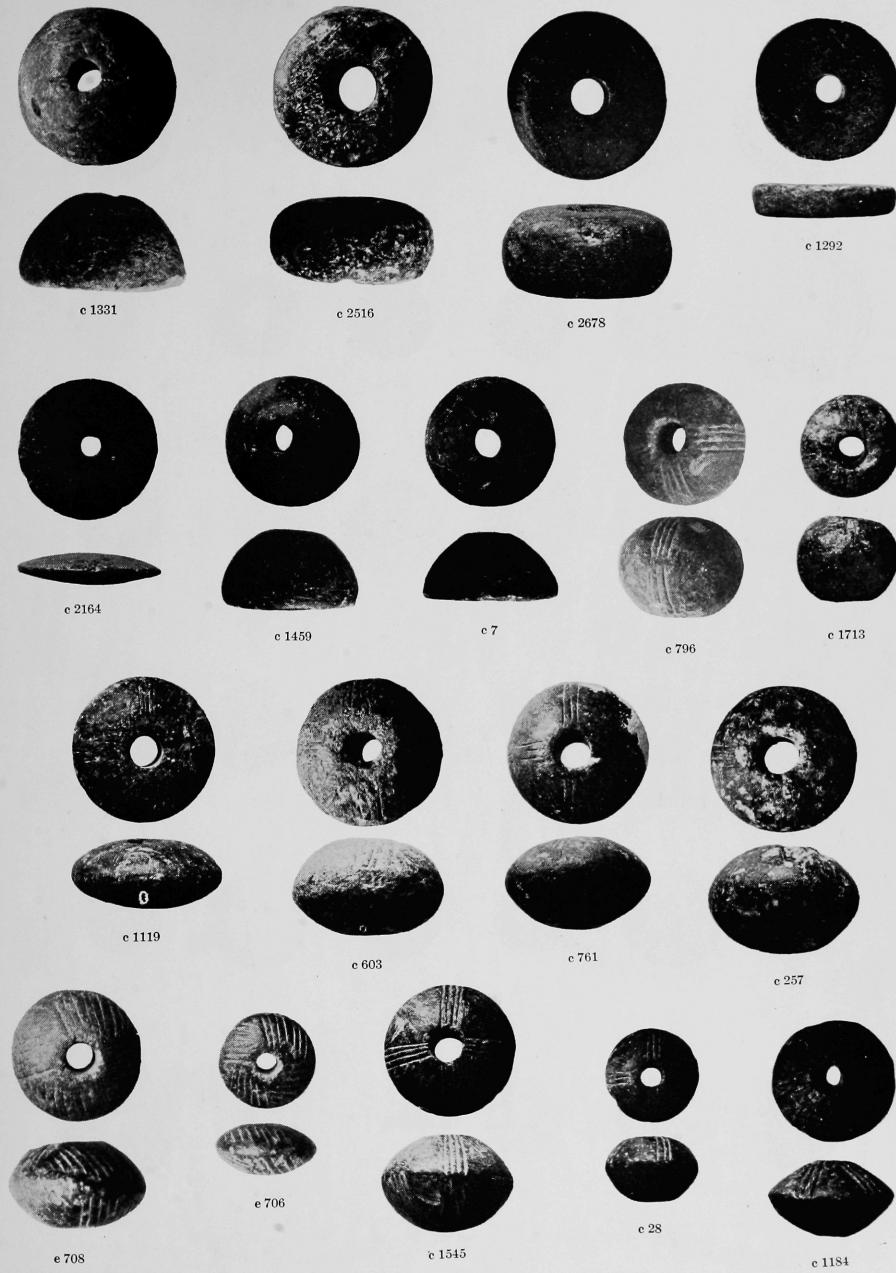


FIG. 188.—PLAIN AND ORNAMENTED SERPENTINE "WHORLS." ACTUAL SIZE

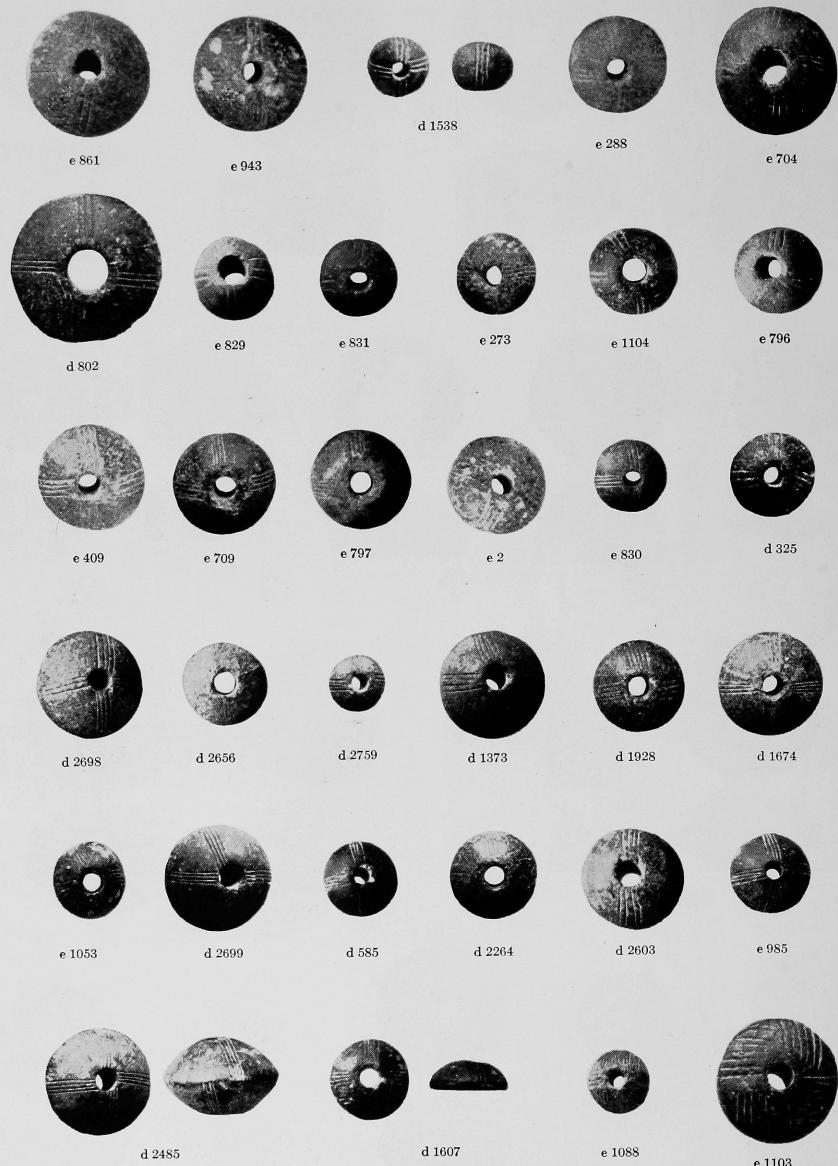


FIG. 189.—ORNAMENTED SERPENTINE "WHORLS." SCALE, ABOUT 2:3

In deposits of the Hittite period: c 791 in I 33; e 1213 in VV 24; d 1538 (Fig. 189) in T 30; d 1928 (Fig. 189) in T 31; d 585 (Fig. 189) in U 30
 In a Hittite-Post-Hittite refuse layer: e 288 (Fig. 189) in E 7; d 2264 (Fig. 189) in M 33-34; d 325 (Fig. 189) in S 31; c 603 (Fig. 188) in XX 24
 In Byzantine deposits: c 28 (Fig. 188) in J 30; c 761 (Fig. 188) and c 796 (Fig. 188) in YY 22; d 1373 (Fig. 189)
 on the surface

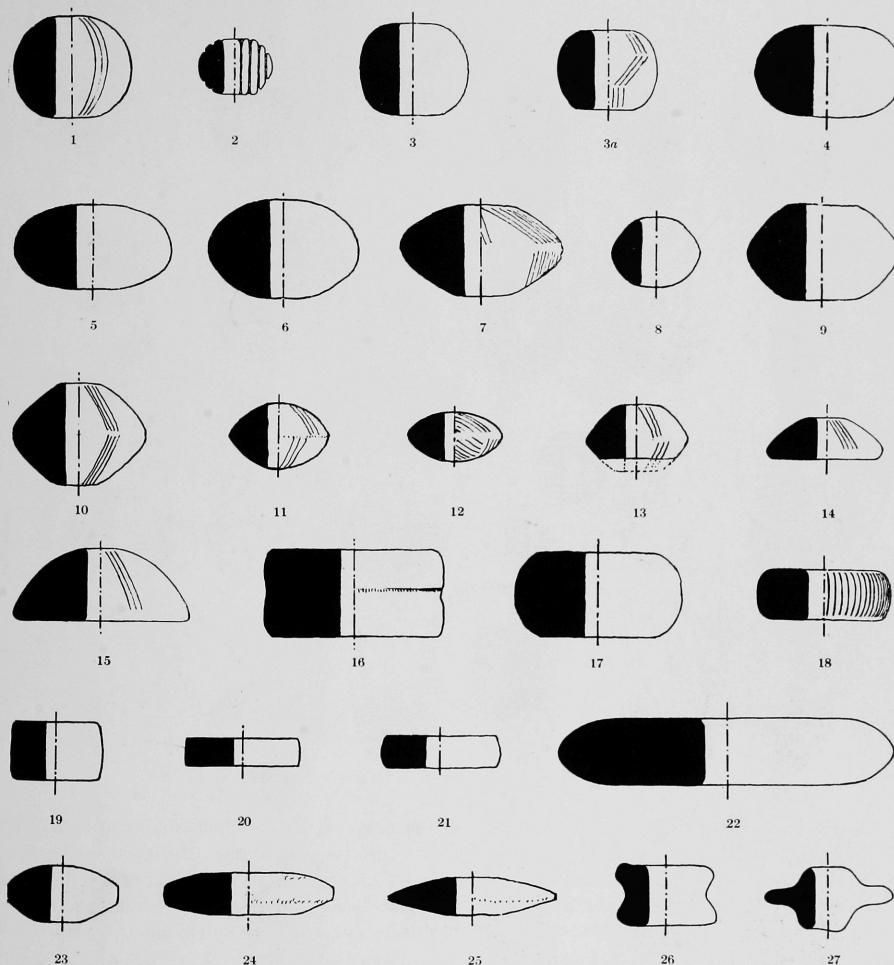


FIG. 190.—CROSS-SECTIONS OF SERPENTINE "WHORLS." ACTUAL SIZE

Other stone objects are shown in Figure 192. Rectangular pieces of slate with one perforation at the top (e.g., d 1726 and e 1002), a type of object which had already appeared in the Chalcolithic period, are now more frequent. A roughly conical stone object with one perfora-

tion at the top and a depression in the bottom, perhaps the handle of a drill, appears in this cultural deposit for the first time (e.g., e 754). No. e 804 is a piece of tufa, seemingly used for polishing needles or pins. No. d 229 is a piece of hematite which seems to have been used for polishing. No. e 2190 also is an object probably used for polishing. Many fragments of such objects were found. A great number of polishing stones (pebbles) again came to light (cf. Fig. 91).

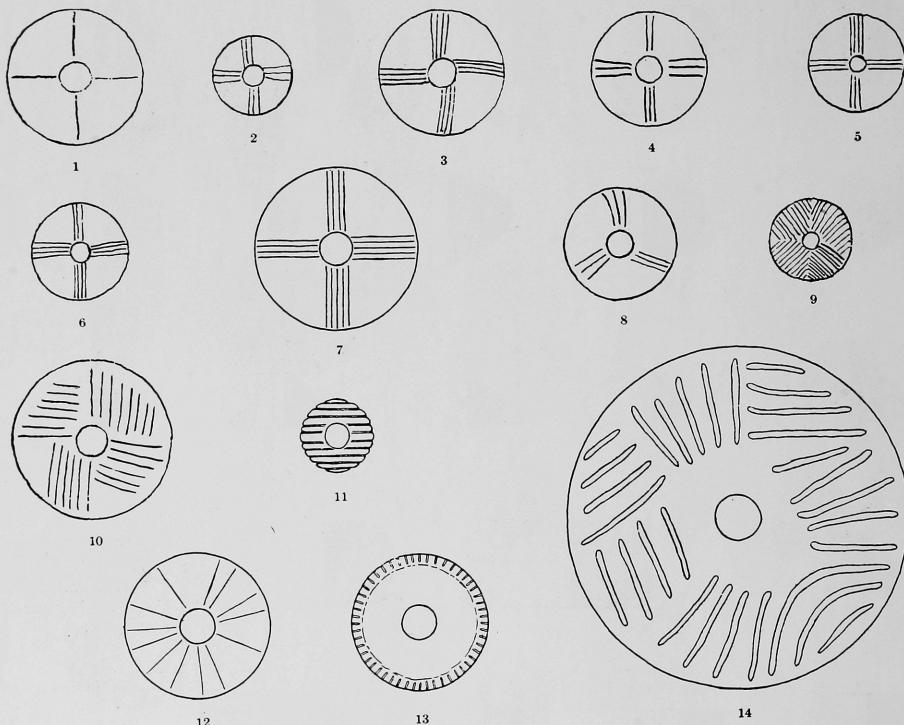


FIG. 191.—DECORATIONS OF SERPENTINE "WHORLS." ACTUAL SIZE

Numerous pendants have been found; the three principal types are illustrated by Nos. e 594, e 1043, and e 520. The material is generally slate, diorite, or marble. Beginning with the Copper Age oblong objects of hematite, such as No. e 711, appear. Though similar forms occur very early in Mesopotamia as weights, the Alişar objects may well be amulets instead. Peasants in certain regions of Anatolia still use such objects as amulets to determine the sex of unborn children. The object is taken horizontally between two knife blades. If the amulet does not move, the child will be a girl; if it turns, the child will be a boy.

Beads made of diorite, limestone, and marble have been found in great numbers. The most common types are illustrated by Nos. d 1974, d 1725, and d 1977. Nos. d 1672 and e 825 are rectangular; and No. d 271, made of aragonite, is a truncated cone. No. d 1350 is of reddish chalcedony, and No. d 1732 is of banded agate.

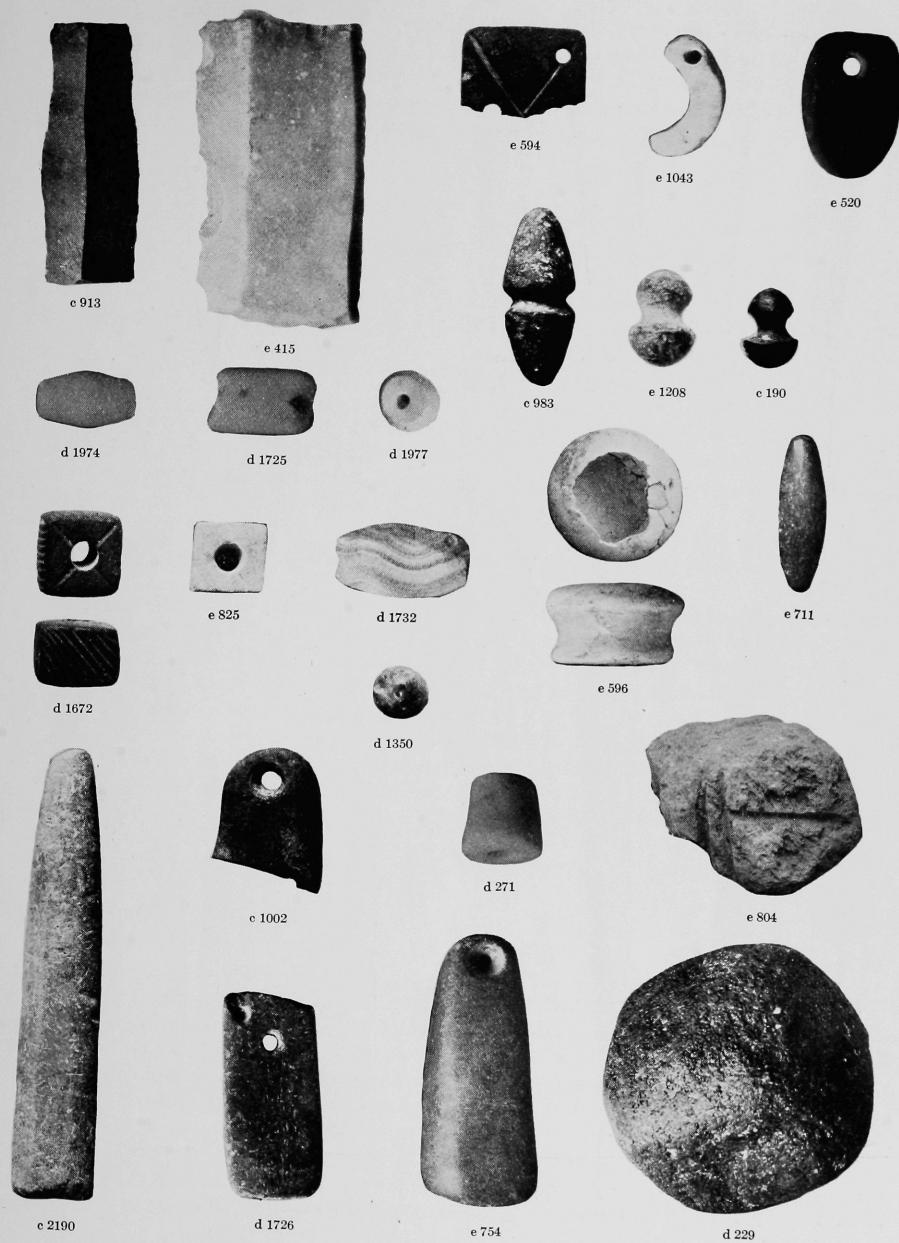


FIG. 192.—MISCELLANEOUS STONE OBJECTS. ACTUAL SIZE

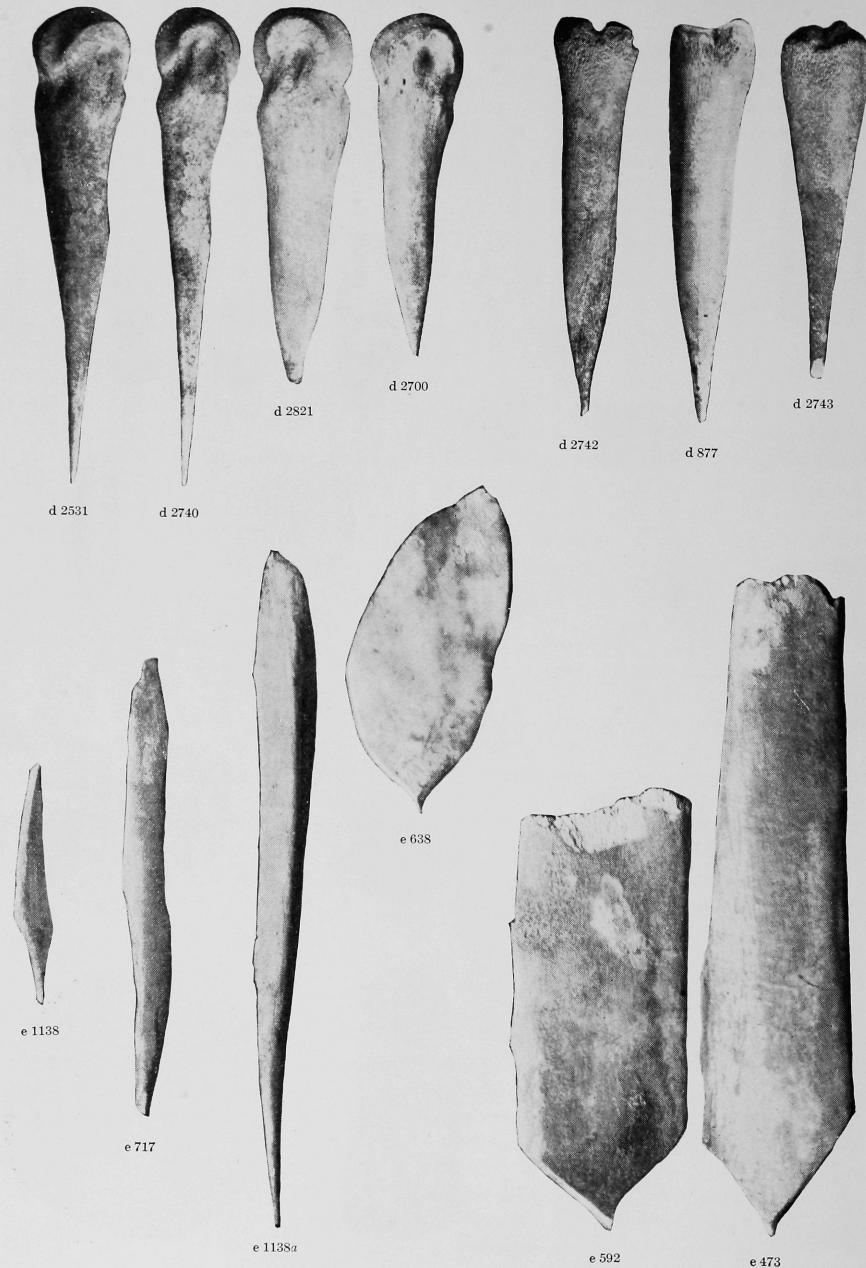


FIG. 193.—TYPICAL BONE JOINT AWLS (UPPER ROW) AND OTHER AWLS OF THE COPPER AGE. ACTUAL SIZE

Several stone toggles were found, although they became frequent only in the Hittite period. They are illustrated by Nos. c 983 and e 1208, of serpentine, and No. c 190, of diorite.

A small receptacle (e 596) made of very brittle gypsum was found in L 15-16.

Hand mills, mortars, pestles, hammerstones, and door sockets were frequent, but did not show any peculiarities. Stone figurines are described on pages 177-80; stone seals, on pages 183-85.

BONE OBJECTS (FIGS. 193-94)

The typical awls of the Copper Age are made of sheep bone, the handle being either a socket joint (e.g., d 877 and d 2742-43) or a ball joint (e.g., d 2531, d 2700, d 2740, and d 2821). A few such awls appeared in the last two Chalcolithic levels (cf. p. 87) and a few in refuse layers where pottery of the Copper Age mingled with that of the Hittite period.

Three flat awls (e 473, e 592, and e 638) are of a type quite different from the typical flat awl of the Chalcolithic layers. Bone splinter awls are frequent (e.g., e 717, e 1138, and e 1138a) but are no longer as large as those of the Chalcolithic age. A very fine awl, No. e 818 (Fig. 194), consisted of a bone handle with a copper or bronze point inserted.

One awl typical of the Hittite period was found in a disturbed layer in M 29 where pottery fragments of the Copper Age, the Early Bronze Age, and the Hittite period appeared in equal parts. It was made from a metatarsal bone of a horse or an ass.^{26a}

Flat spatulate objects (e.g., c 8, e 427, e 547, and e 641) appeared frequently, sometimes very carefully polished and sometimes showing a perforation at the upper end. Their use is problematical.

Nos. d 687 and d 2148 are examples of two types of pins or weaving needles known from the Chalcolithic period; such objects become more and more frequent until the Roman-Byzantine period. Two other forms of pins are represented by Nos. d 1464 and d 2747.

Bone tubes, often serrated at both ends, now become common (e.g., e 426, e 548, and e 593). Knucklebones (e.g., e 551), mostly of sheep, appear; they may be either perforated or unperforated. Several perforated human finger bones were found (e.g., d 1290).

In 1929 several thin, rather long bone implements, some with a small perforation at one end, were found.²⁷ Such an implement is No. e 472, of which the perforated point is broken off. These may have been awls, spindles, or weaving tools. In 1929 also a toggle and a small pendant were found.²⁸

For shells and unwrought animal bones see *OIP* XXX 324-27 and 294-309.

METAL OBJECTS

COPPER OR BRONZE

As stated previously (p. 110), the transition from copper to bronze must have taken place within the last phases of this period. The distinction between copper and bronze could of course be certain in every case only if an analysis of every object were made. This was, for obvious reasons, impossible;²⁹ so the objects of this period are designated as "copper or bronze."

^{26a} Cf. d 533 (*OIP* XXIX, Fig. 265).

²⁷ *OIP* XIX, Fig. 84.

²⁸ *OIP* XIX 71.

²⁹ Of the twelve Copper Age pins analyzed, six showed less than 2 per cent tin. The tin content of the other six varied from 3.33 to 10.8 per cent; see *OIP* XXX 338 f.



FIG. 194.—BONE OBJECTS. ACTUAL SIZE

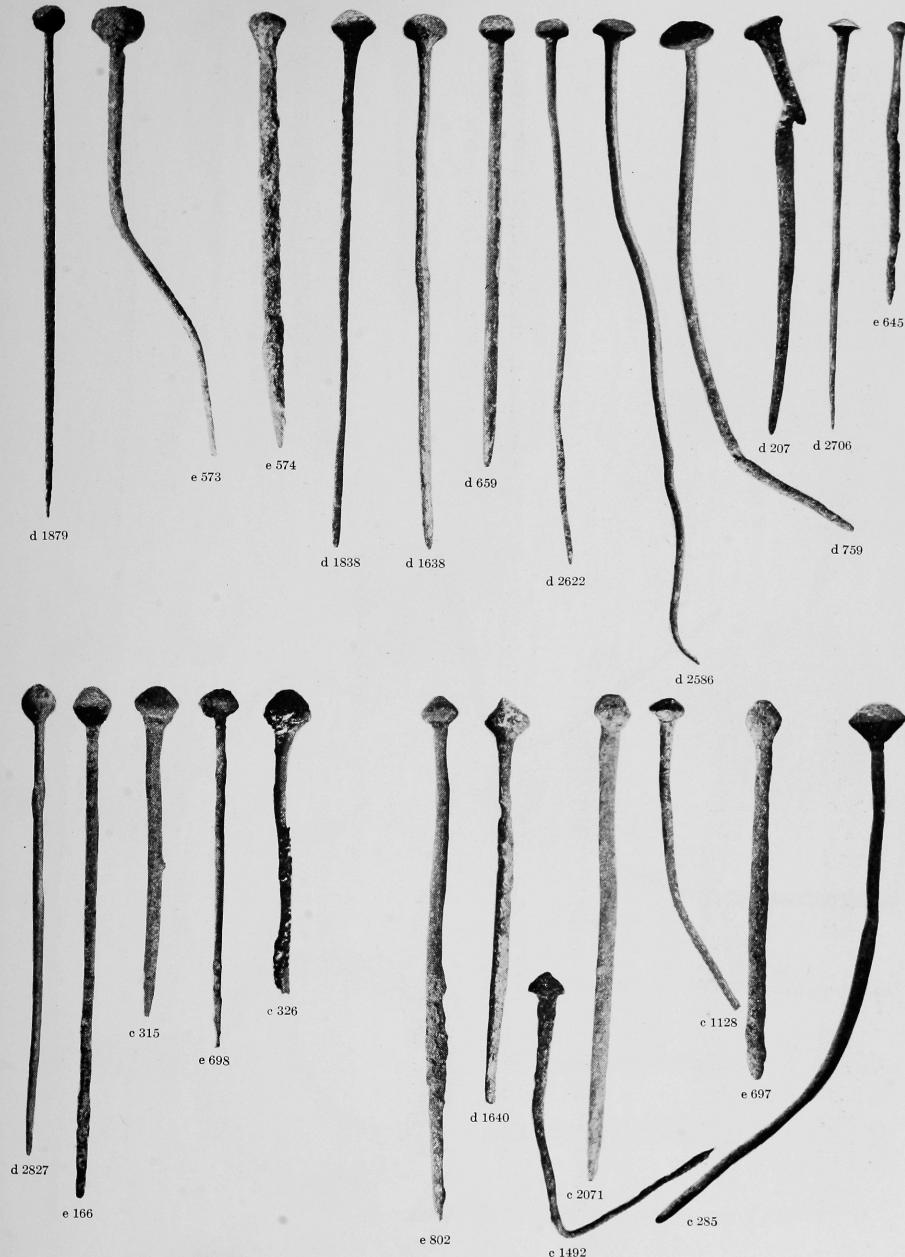


FIG. 195.—COPPER OR BRONZE PINS. ACTUAL SIZE

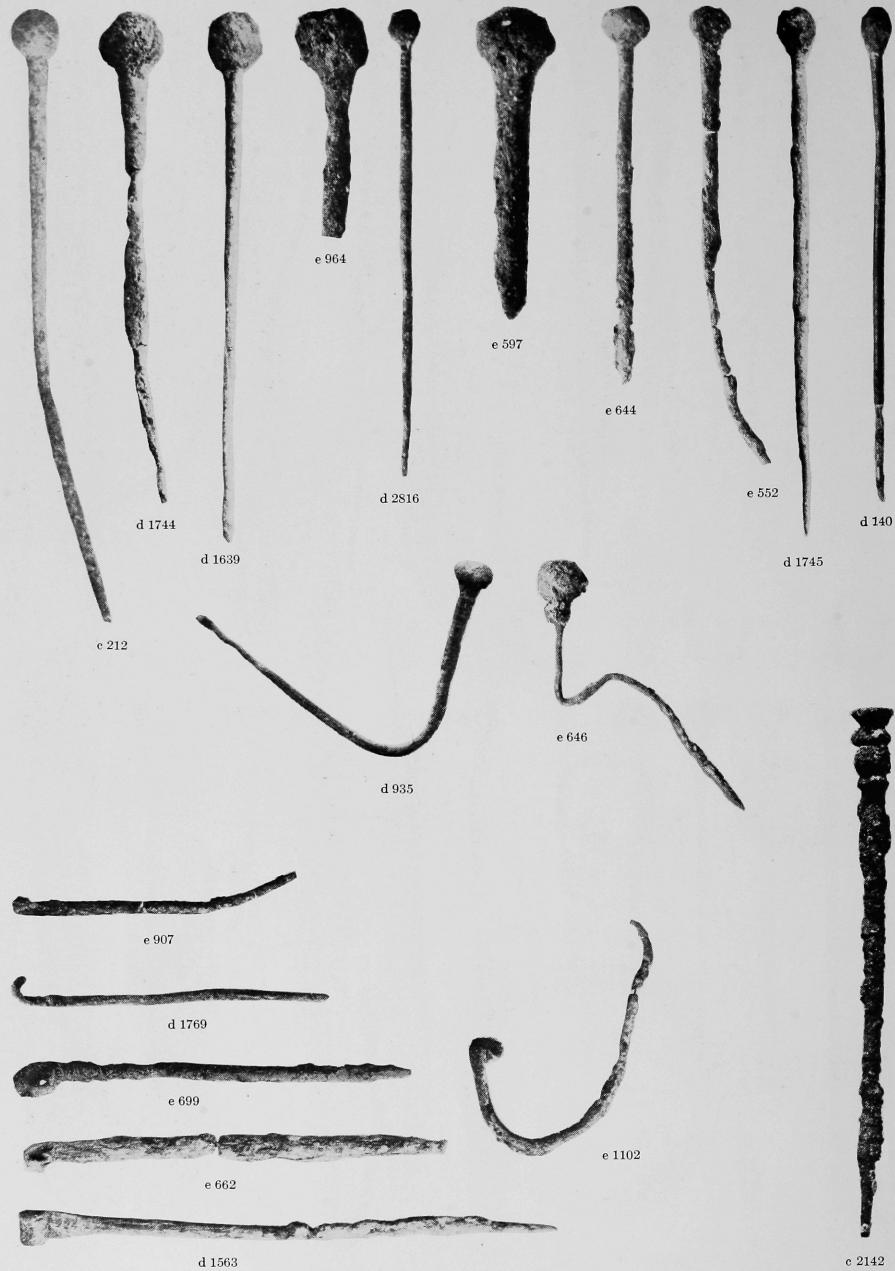


FIG. 196.—COPPER OR BRONZE PINS. ACTUAL SIZE

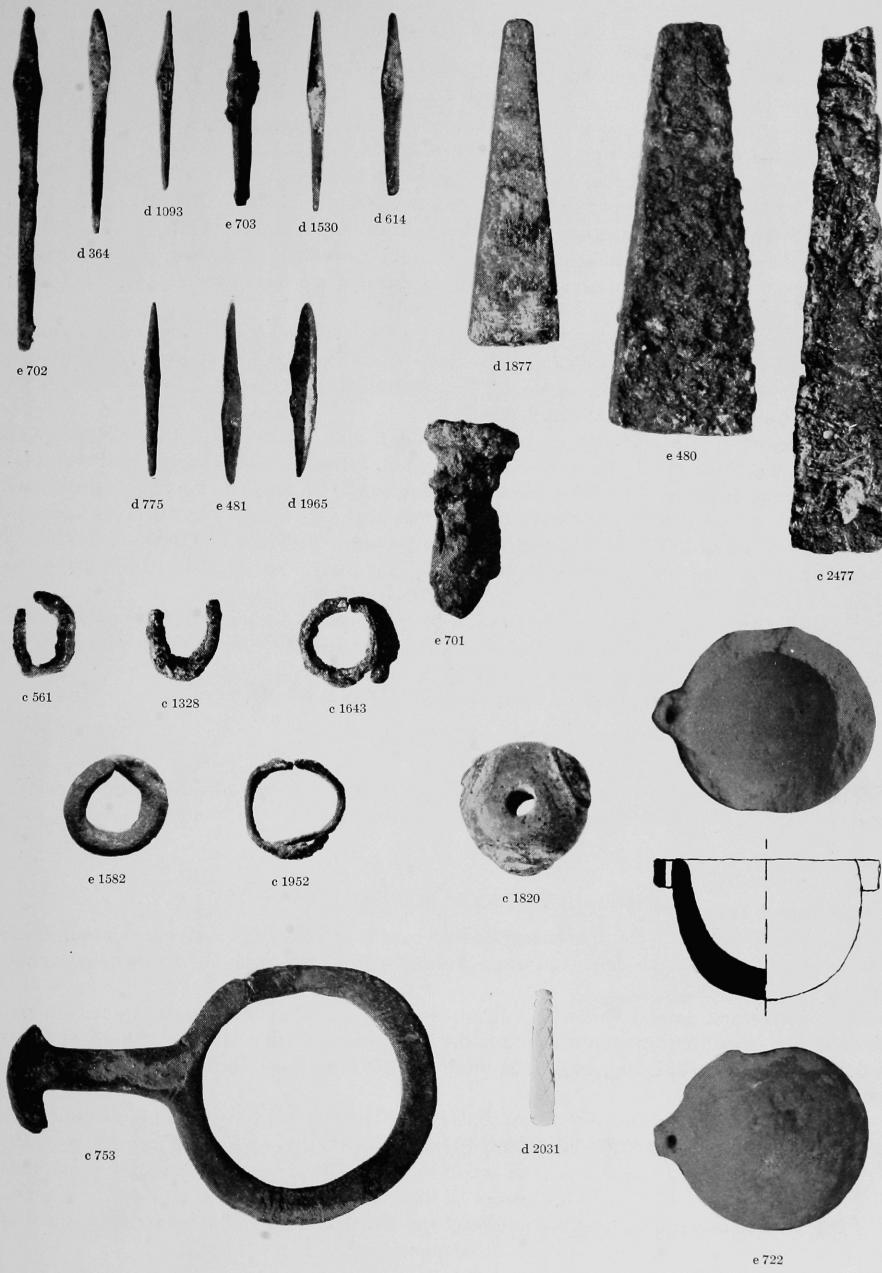


FIG. 197.—COPPER OR BRONZE OBJECTS AND FRIT OBJECTS. ACTUAL SIZE

The variety of shapes of pinheads in this period is surprising. The pins illustrated in Figures 195-96 were found in deposits of the Copper Age. Pins which were found as mortuary gifts with burials of the Copper Age and are therefore of greater value for dating purposes are illustrated with the respective burials (c 2657 with c X20 in Fig. 142; d 1101 with d X15 in Fig. 145; d 1102a with d X16 in Fig. 146; d 2977 with d X27 in Fig. 150; d 2761 with d X46 in Fig. 153; d 2894 with d X48 in Fig. 155; e 679 with e X8 in Fig. 159; e 680 with e X9 in Fig. 160). Typical seems to be a rather large globular head (e.g., c 212, d 1744, d 1639, e 964, in Fig. 196). Scrolled, ovoid, plano-convex, conical, and biconical heads and heads with circular, ovoid, or rectangular bases appear. Especially interesting are the fine pins e 680 (Fig. 160) and c 2142 (Fig. 196).

A common metal object of the Copper Age is a rather small point with cross-section usually rectangular but sometimes round (Fig. 197). Such points may have been used as arrowheads, although their use for awls is also possible. An awl consisting of a copper or bronze point set in a bone handle (e 818) is shown in Figure 194.

A few bracelets with overlapping ends were found. No. d 2895 was with skeleton d X48 (Fig. 155), and No. d 1102b was with d X16 (Fig. 146). One complete bracelet and two fragments found in 1929 show incised strokes on the outside.³⁰ In cross-section the bracelets are either round or oval. Finger rings and small earrings also were found (Fig. 197). As a mortuary gift with burial d X14 was unearthed a fragmentary necklace (d 1100a) consisting of alternating large and small copper or bronze beads (Fig. 144). Nos. c 2477, d 1877, and e 480 (Fig. 197) are fragments of tweezers, and No. e 701 is a tie pin or nail.

Fragments prove that blades were made of copper or bronze, although we have no complete specimens. A great number of copper or bronze objects appeared which were too corroded to be identified. Metal stamp seals are described on pages 183-85.

Analyses of some metal objects are published in *OIP* XXX 338 f.

LEAD

Besides pieces of lead wire and indeterminable fragments, a very interesting object made of lead (c 753, Fig. 197) was found. It may have been used to draw a bowstring.

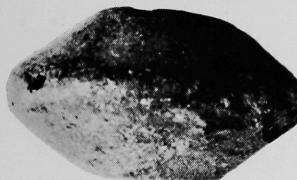
MINOR OBJECTS OF POTTERY OR CLAY

The pottery "whorls" typical of this period are oval in cross-section and ornamented. Some plain "whorls" of the same shape and some plain or ornamented "whorls" of other shapes also appear (Figs. 198-203).

The ornamented pottery "whorls" fall into two groups. The first usually shows an oval cross-section, sometimes with a sharp shoulder; the ornamentation is either incised or punctated-incised (e.g., c 334, Fig. 199). The origin of this form must certainly be attributed to the Copper Age.

The second group has a more nearly globular cross-section, and its ornamentation is mostly punctated-incised (e.g., c 1193, Fig. 199). "Whorls" of this group appear frequently in the culture deposits of the Early Bronze Age and of the Hittite Empires as well; it may be possible that the greater part of this group belongs to the period of the Hittite Empires. "Whorls" of the first type also appear in the deposits of the Hittite Empires, but so sporadically that their attribution to the Copper Age cannot be questioned.

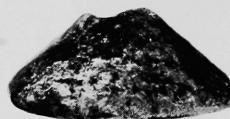
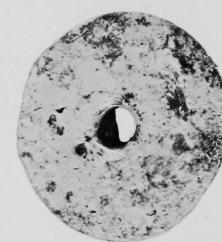
³⁰ *OIP* XIX 59 and Fig. 66.



c 907



c 2422



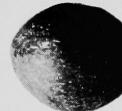
c 782



c 2038



c 2424



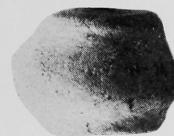
c 311



c 1371



c 2084



c 167



c 1227



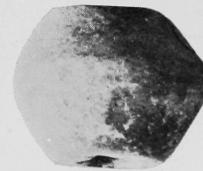
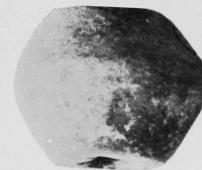
c 2135



c 298



c 1815



c 16

FIG. 198.—PLAIN POTTERY "WHORLS." ACTUAL SIZE

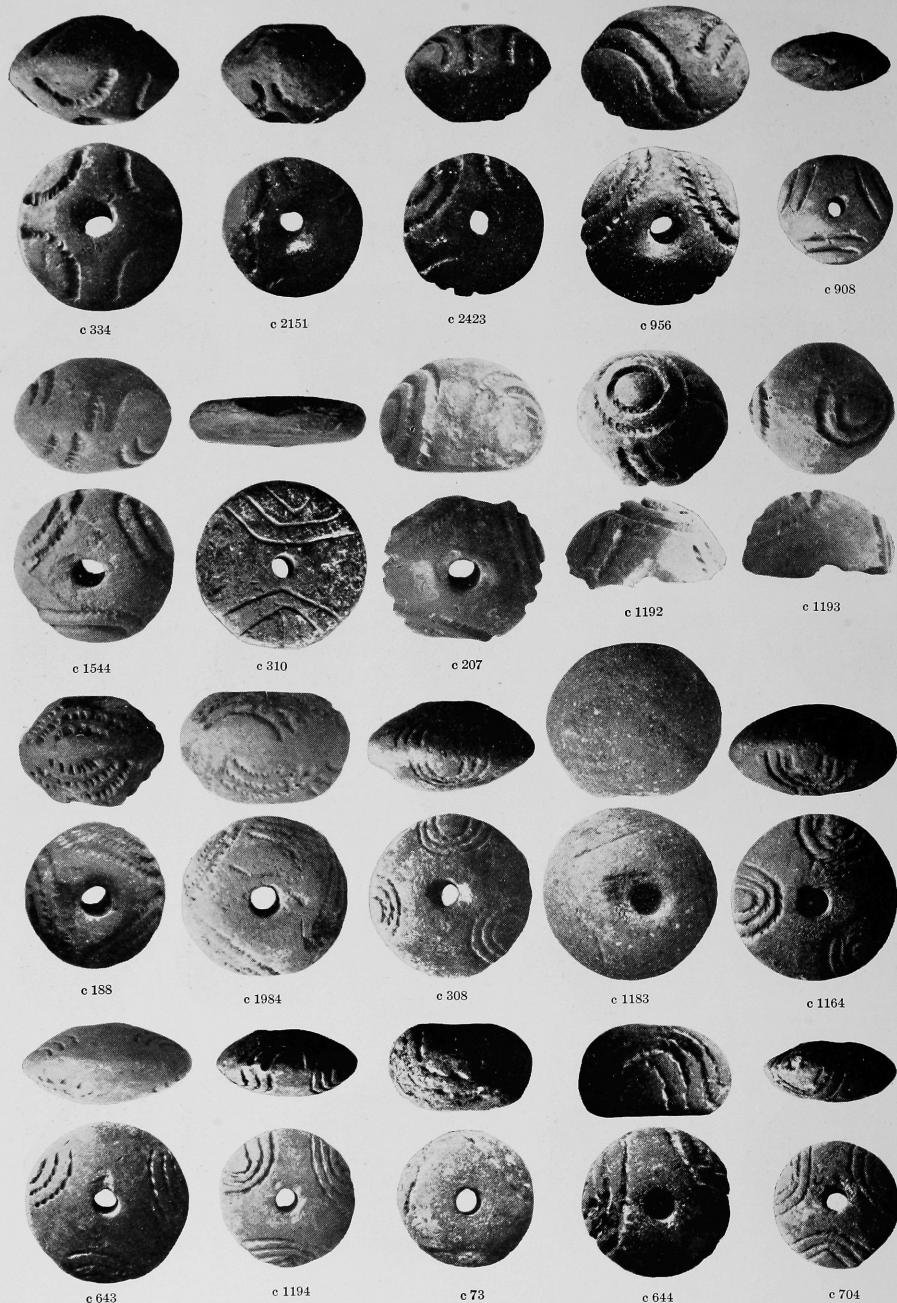


FIG. 199.—ORNAMENTED POTTERY "WHORLS." ACTUAL SIZE

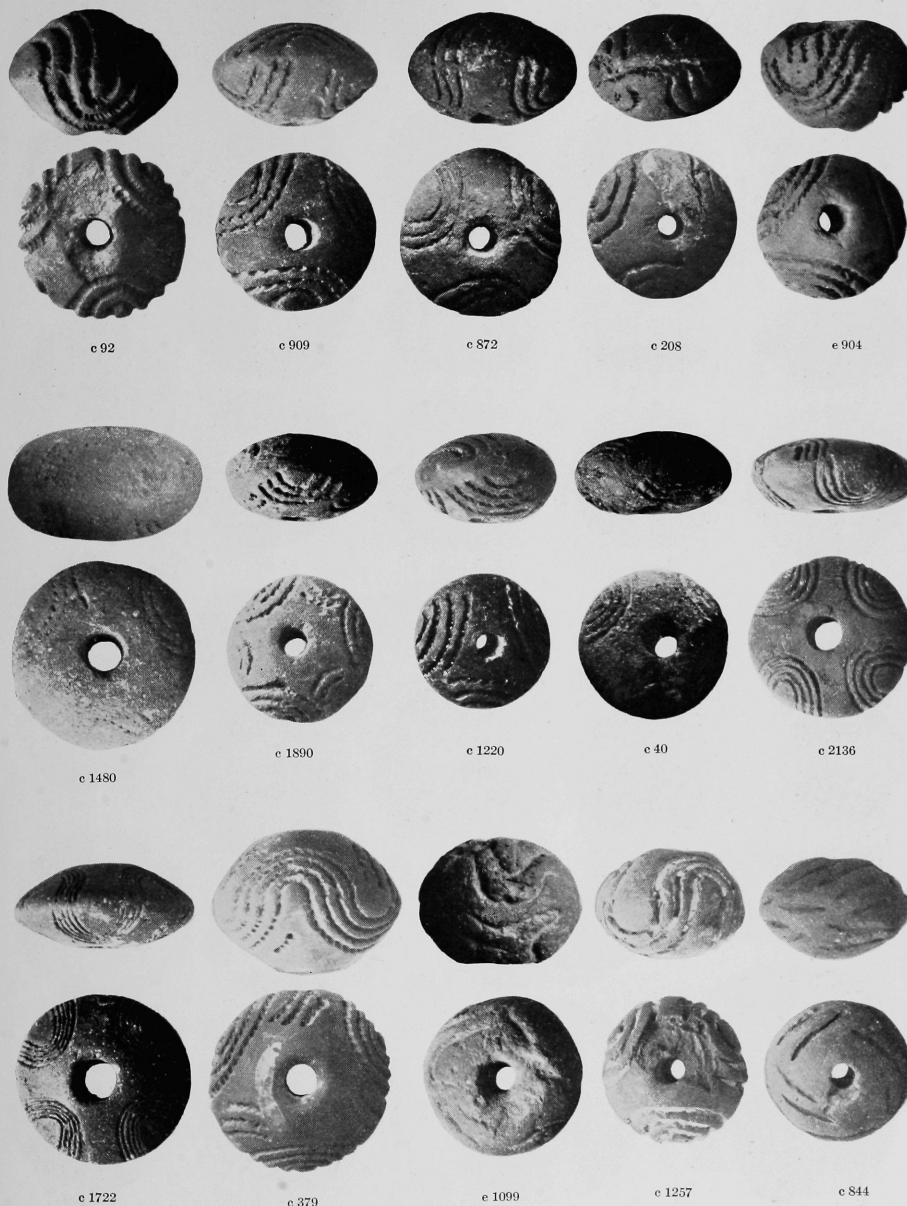


FIG. 200.—ORNAMENTED POTTERY "WHORLS." ACTUAL SIZE

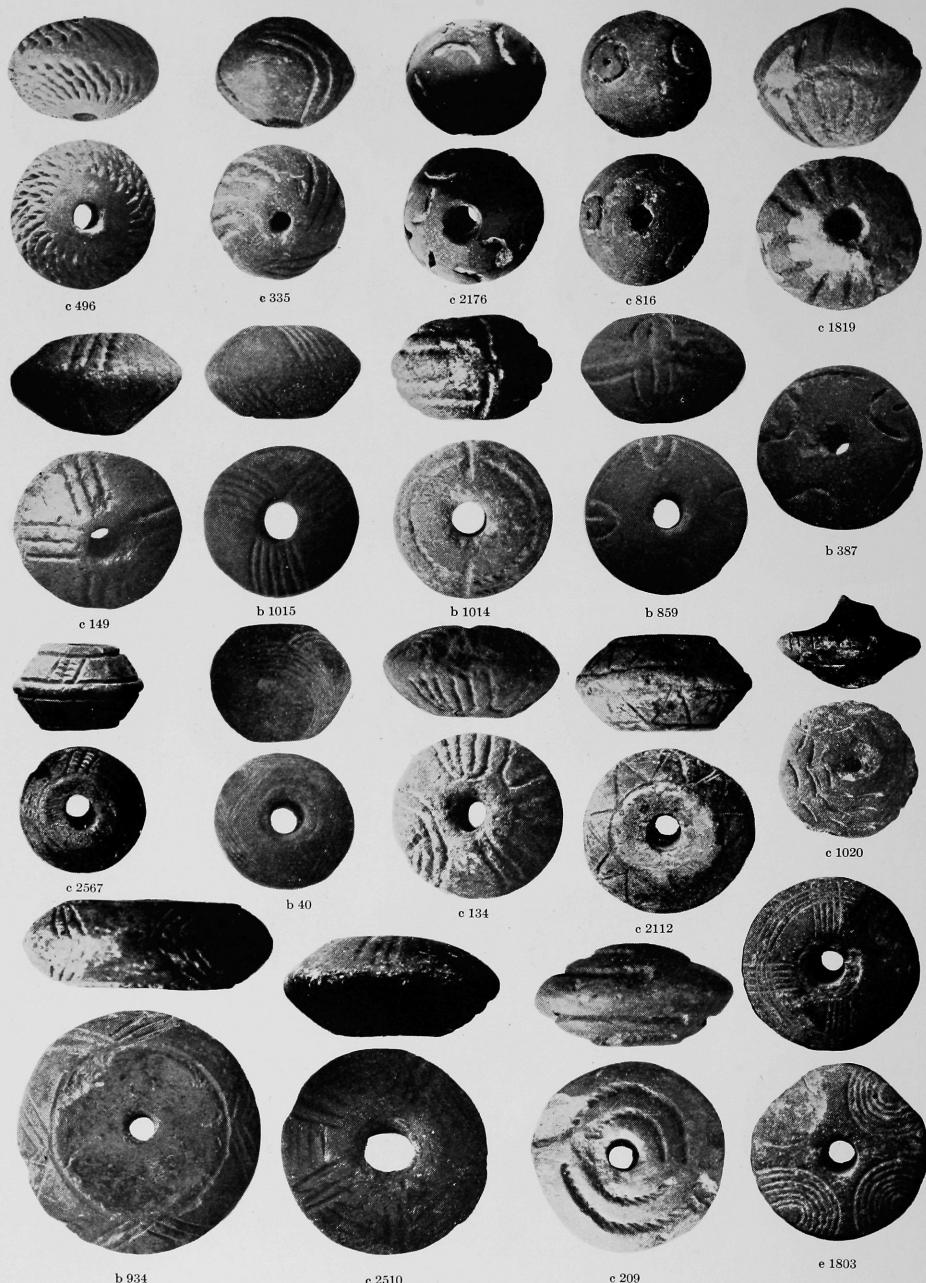


FIG. 201.—ORNAMENTED POTTERY "WHORLS." ACTUAL SIZE

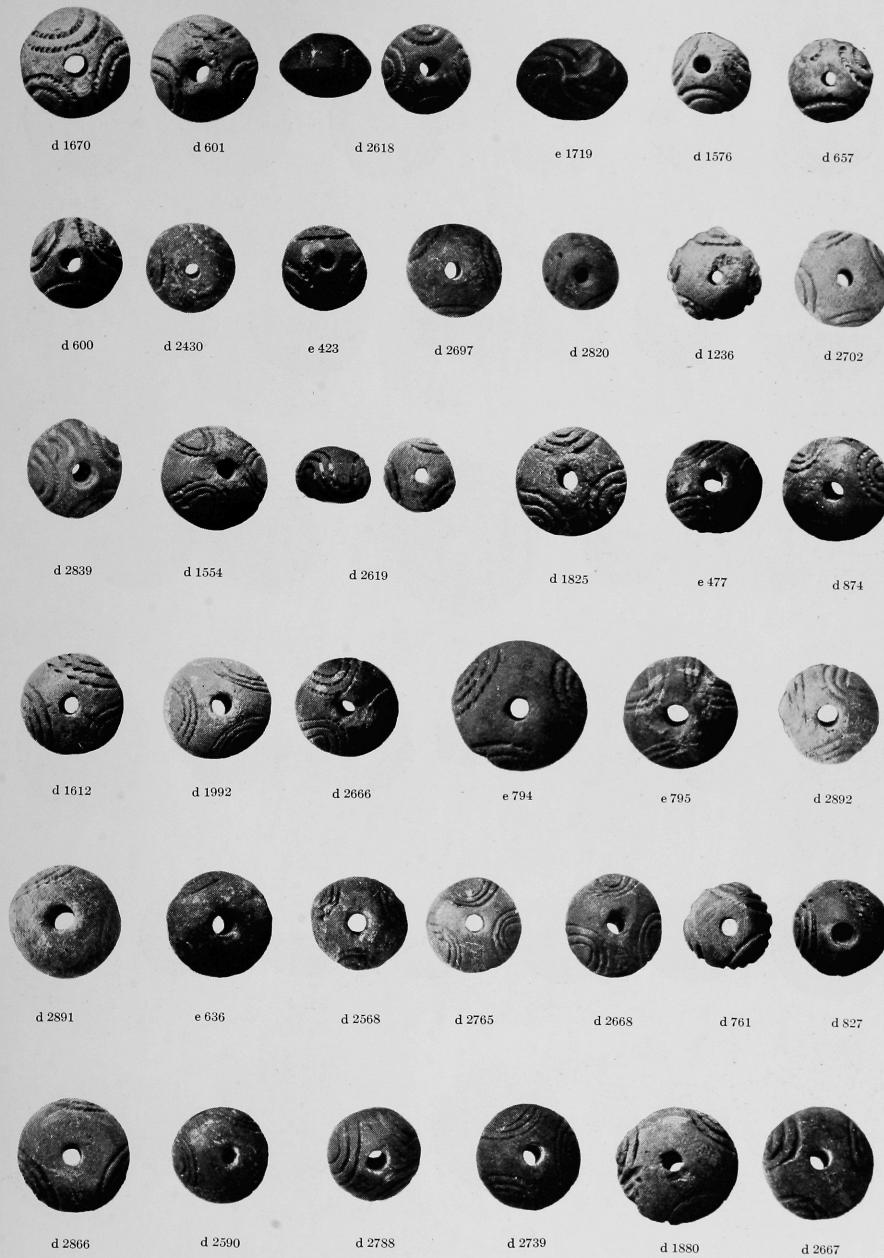


FIG. 202.—ORNAMENTED POTTERY "WHORLS." SCALE, 2:5

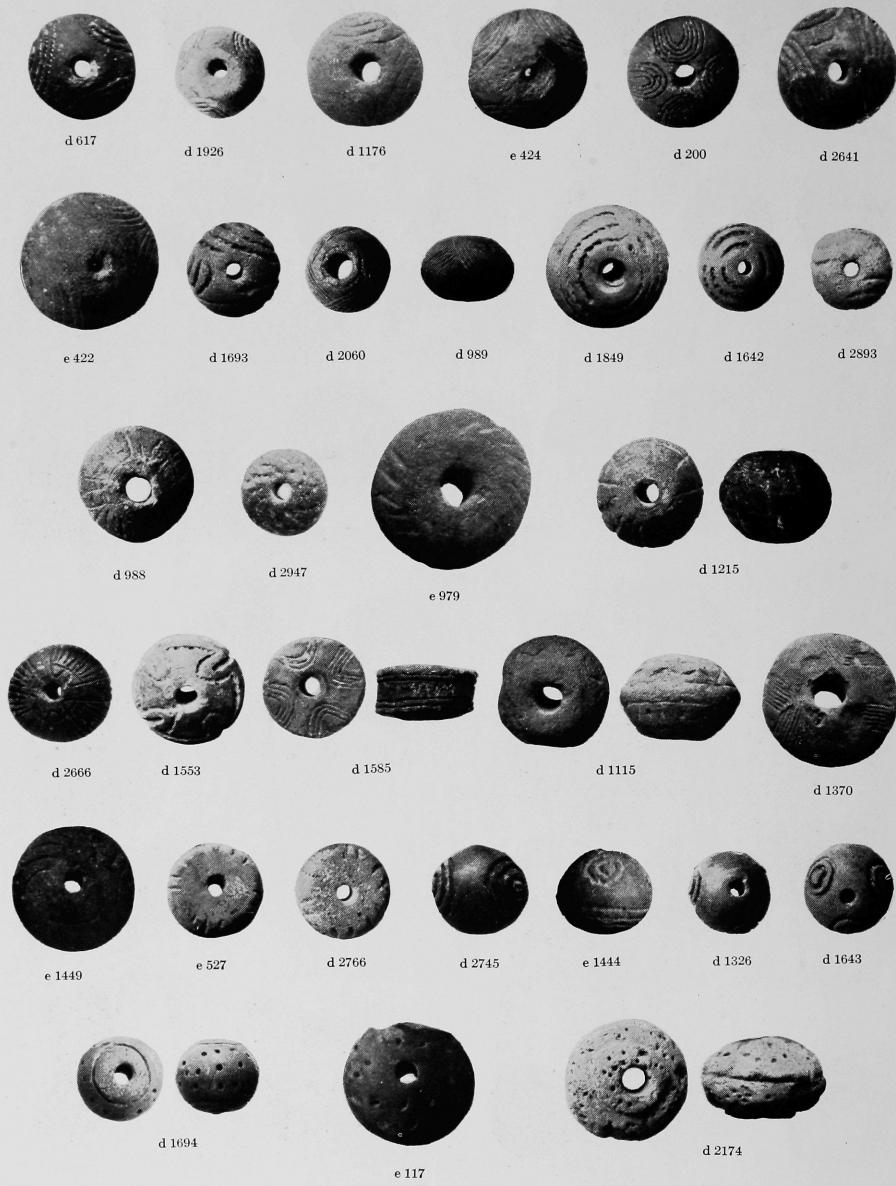


FIG. 203.—ORNAMENTED POTTERY "WHORLS." SCALE, 2:5



FIG. 204.—MISCELLANEOUS POTTERY OBJECTS. ACTUAL SIZE

A few pieces in both groups show irregularly distributed dots (e.g., d 1694 and d 2174, Fig. 203). The punctated-incised "whorls" were probably inlaid with some white material, for Nos. c 644 (Fig. 199), c 1257 (Fig. 200), c 2176 (Fig. 201), and d 2619 (Fig. 202) show remains of white inlay.



FIG. 205.—ANDIRONS AND LOOM WEIGHTS. SCALE, ABOUT 1:2

The "whorls" illustrated in Figures 198-203 have been arranged to show related patterns. It should be noted that two specimens each show different patterns on the upper and lower surfaces: No. d 2666 appears in Figures 202-3; No. e 1803, in Figure 201. "Whorls" c 207, c 1192-93 (Fig. 199), c 816 (Fig. 201), d 1326, d 1643, d 2745, and e 1444 (Fig. 203), which show deeply incised single or concentric circles, deserve special mention. They may be proto-

types of the later eye beads (cf. p. 93).³¹ Nos. b 1015 and c 149 (Fig. 201) have the ornamentation typical of serpentine "whorls" of this period.

The "whorl" form with a depression on one or both sides originated, I believe, in the Early Bronze Age (cf. Figs. 273-76). Although some such "whorls" were found in the deposits of the Copper Age, they should be considered as stray pieces.

Other small pottery or clay objects are shown in Figure 204. The miniature vessels are mostly very poorly made. Several roughly reworked potsherds have been found (e.g., e 478, e 572, and e 591); they seem to have been used for polishing. Globes with deep incisions, probably once inlaid with white or other light material, had some unknown use. A few "cakes" (e.g., e 1011 and e 2216) were found, also one thin disk (e 903) with a roughly engraved design. No. e 519 is a small pottery pendant. No. d 262 is an unidentified object with punctated-incised decoration.

In the deposits of this period there were several fragmentary pottery andirons or spit-supports (e.g., e 607, Fig. 205) of the type which appears frequently in the Early Bronze Age. Nos. e 858 and e 1283a (Fig. 205) show rather unusual forms. No. d 1683 (Fig. 183), described with figurines, and No. e 1732 (Fig. 100) are probably fragments of andirons; No. e 1732 may well belong to the Copper Age, although it was found in a deposit of the Chalcolithic period.

Loom weights (Fig. 205) have essentially the same roughly pyramidal form as those of the Chalcolithic period. Egg-shaped loom weights (e.g., e 681) appear also. Pottery figurines are described on pages 177-83, a fragment of a "label" with a stamp seal impression on page 183.

FRIT OBJECTS

A frit object with incised decoration (d 2031, Fig. 197) was perhaps a pendant. No. e 722 (Fig. 197) is a miniature vessel of frit with two perforated knob handles. Traces of greenish blue glaze were discernible. Small frit beads were of the same shape and color as those of the Chalcolithic period. Several beads of black or grayish paste with white inlay in three pairs of concentric circles (e.g., c 1820, Fig. 197) have been found; they are of the same type as some beads of the period of the Hittite Empires³² and may well be intrusive here.

³¹ Cf. also *OIP* XXIX 284.

³² See *OIP* XXIX, Fig. 309, second row.

IV

THE EARLY BRONZE AGE

The cultural deposit following that of the Copper Age on the citadel mound was approximately 3.00–3.50 thick and was characterized by handmade pottery with geometric designs in one or two colors. Other objects belonging to this cultural level, such as pins and awls, are practically the same as those of the Copper Age. As most metal objects of this period are presumably bronze, and as the culture cannot yet be attributed definitely to any historically known people, this period is here called the Early Bronze Age. No actual date can yet be assigned to it, but its beginning in Alişar is somewhat later than Troy II, and its end falls within the beginning of the period of the Hittite Empires in Asia Minor.¹

The cultural deposit of the Early Bronze Age on the citadel mound definitely shows two main building levels. The earlier, Level 6 M, was reached in O 9–11, L 11–12, and K–L 14 (Fig. 206). Mixed with the typical ware of the Early Bronze Age in this earlier building level was a finer reddish buff ware with geometrical ornamentation in purplish brown. This ware had appeared sporadically in the last building level of the Copper Age. In O 9–11 remains of a strong outer defense wall 8.50 north of the Copper Age outer defense wall (cf. p. 116) indicated that the fortified area of the citadel had been enlarged. We found no traces of this first Early Bronze Age outer defense wall on the south slope of the citadel mound, but the assumption that such a wall existed there is tenable in view of the approximately horizontal plane of the deposit in K–L 14.

The second building level of the Early Bronze Age on the citadel mound (5 M) was reached in the above mentioned plots and in M–O 14–15. In this level we found mixed with the typical Early Bronze Age ware many fragments of the monochrome wheelmade ware which we can now assume to have been contemporaneous with the duration of the Hittite Empires in Asia Minor. An admixture of new types belonging to the latter period could also be discerned among the small objects. During the second building period of the Early Bronze Age the citadel mound was again surrounded by a very strong fortification, which, with many subsequent repairs and additions, was used until at least the middle of the first millennium B.C. On the citadel this second building level showed signs of violent destruction and was covered by destruction refuse averaging 2 meters in depth. Above this destruction layer we found building layers of the Post-Hittite period, Levels 4a–c M. No building layer yet found on the citadel mound shows remains of the period of the Hittite Empires only. Nevertheless, the great number of small objects and sherds belonging to that period, especially at the southern gateway of the citadel, suggests the possibility that a Hittite Empire building level once existed on the citadel mound.

It is most unfortunate that we were unable to excavate the whole interior of the citadel down to the foundations of the large fortification. This had been one of our main objectives in 1932. On the basis of our present knowledge we can only say that the end of the material culture of the Early Bronze Age on the citadel mound overlapped the beginning of that culture which we know existed in central Asia Minor for the duration of the Hittite Empires.² An approximate date for the end of this culture is thus furnished.³

¹ Cf. *OIP* XXX 429–33.

² See *OIP* XXIX 1 and 3.

³ Cf. *OIP* XXX 433.

On the city terrace only one building level could be distinguished among the exceedingly meager and fragmentary building remains of this period. The actual building remains were all found relatively near the citadel mound, as in J 22-23, I-J 25, J 26, and T-U 13 (Fig. 206). Nevertheless, typical sherds of this period appeared, in almost every spot where we pierced the deposit of the Hittite Empires, before we reached the pure Copper Age deposit.

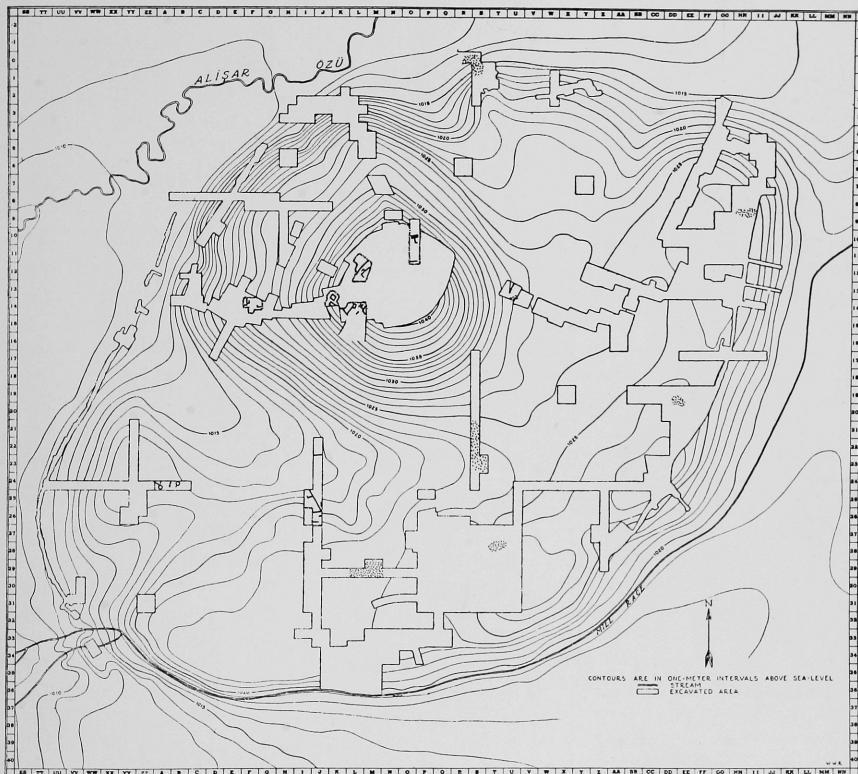
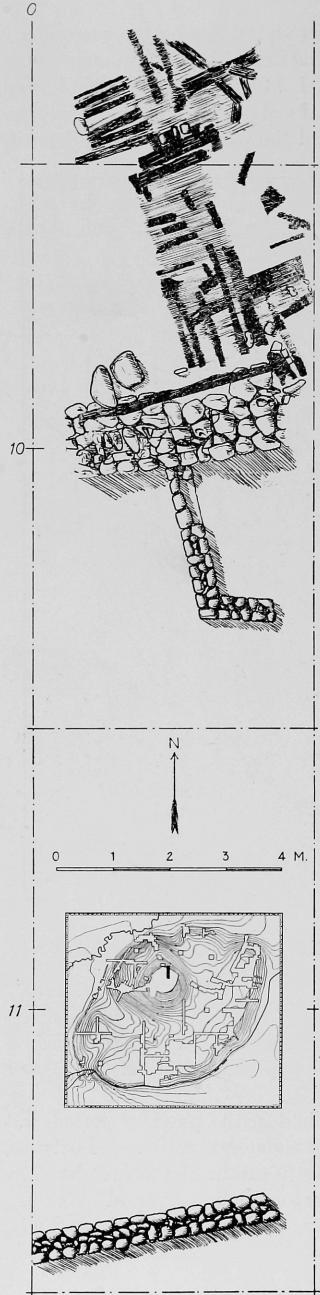


FIG. 206.—LEVEL 12 ON THE TERRACE AND LEVEL 6 (FIRST BUILDING LAYER OF THE EARLY BRONZE AGE) ON THE CITADEL MOUND. AREAS OF LARGE SHERD FINDS ARE STIPPLED. SCALE, ABOUT 3:10,000

As on the citadel mound, handmade ware with purplish brown decoration on a reddish buff slip was found both in the Early Bronze Age level and in the uppermost layer of the Copper Age.

The architectural remains presented no variations not found in the previous period, but tamped earth walls seem to have disappeared. Remains of a wooden grill were found between the stone foundation and the *kerpiç* superstructure of the fortification of the first building period (6 M.). The large foundation of the citadel wall of the second building period, averaging 5 meters in thickness, was rather crudely built of small stones. The few burials which can be ascribed with some certainty to the Early Bronze Age indicate the same burial methods as in



the preceding period. We found one burial, perhaps two (cf. p. 223), where the body had been laid in a contracted position in a large burial jar and three burials where the bodies had been deposited directly in the earth.

The material culture of this period shows no great difference from that of the Copper Age. With the exception of the pottery vessels the objects from the Early Bronze Age deposit are so similar to those of the Copper Age that very few special types can be assigned to the later culture. Therefore only a few specially interesting pieces are illustrated and described here, whereas for the greater part of the objects reference is made to objects of the Copper Age. Objects typical of the Hittite period but which were found in the upper layers of the Early Bronze Age are treated with their own period.⁴

SETTLEMENT REMAINS AND BURIALS

STRUCTURES ON THE CITADEL MOUND

The most interesting remains of the earlier building level of the Early Bronze Age (6 M) were found in O 9-11. There 12 meters below the summit of the mound the stone foundation of a fortification wall was unearthed. The foundation was about 1.50 wide and .50-60 high and was built of large bowlders (Fig. 207). On top of these bowlders appeared remains of a wooden grill destroyed by a conflagration which had burned part of the *kerpiç* superstructure also (Fig. 208). Extending northward from this wall, approximately at right angles to it, were charred remains of another wooden grill, between the beams of which rested part of a large door socket. It is quite possible that these were remains of a small gateway. A narrow stone wall extended southward from the fortification wall. Near the southernmost limit of O 11 a similar narrow stone wall ran roughly parallel to the fortification wall. The whole space between the fortification wall and the southern limit of O 11 was filled with débris, mute evidence of a violent and thorough destruction. On top of this destruction layer was erected the large fortification wall of the second building period of the Early Bronze Age, Level 5 M (Fig. 209).

Other remains of Level 6 on the citadel mound were uncovered in 1930 in L 11-12 (Figs. 210-11). They comprised fragments of walls with the usual stone foundations and

⁴ OIP XXIX, chap. i.

FIG. 207.—PLAN OF LEVEL 6 M IN O 9-11. SCALE, 1:100



FIG. 208.—REMAINS OF WOODEN GRILL IN O 9-10

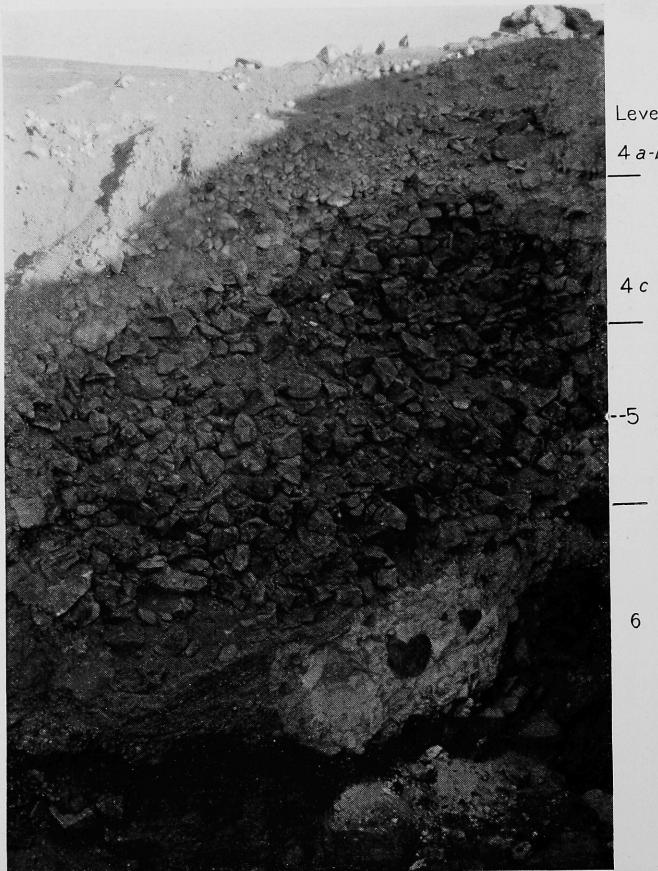


FIG. 209.—EASTERN PROFILE OF THE CITADEL WALLS OF LEVELS 6 AND 5 M IN O10, SHOWING REBUILDINGS OF THE LATTER IN LEVELS 5 AND 4 M

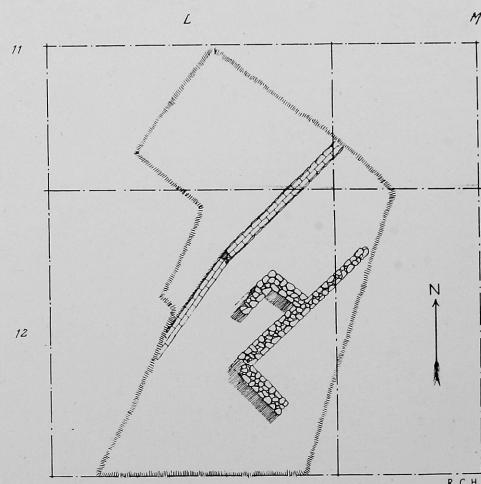


FIG. 210.—PLAN OF LEVEL 6 M IN L-M 11-12. SCALE 1:200

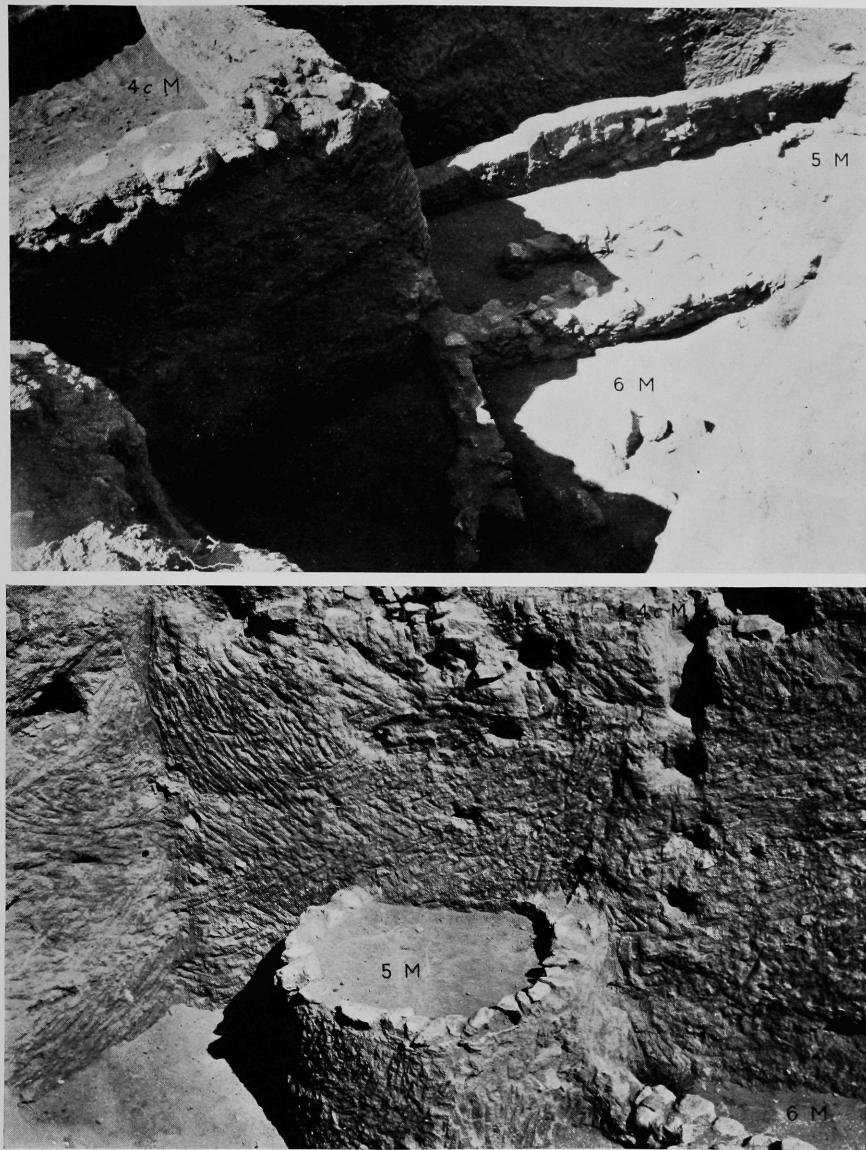


FIG. 211.—LEVELS 5-6 M IN L 11-12 FROM SOUTHEAST (ABOVE) AND FROM WEST (BELOW)

kerpiç superstructures. The walls in L 11-12 showed approximately the same orientation as the building remains in L 14 excavated in 1928⁵ (cf. Fig. 206). Wall remains in J-K 13-14, unearthed in 1927,⁶ also belong to Level 6. Other fragmentary wall remains were found in F 14 in 1929.⁷

The remains of the second building period on the citadel mound, Level 5 M, are by far the most important of the Early Bronze Age. After discovering in 1927 the large citadel wall surrounding the top of the mound, we were keenly interested in this wall, but it was not until 1931 that we could really investigate it thoroughly. Dr. Kurt Bittel, who had been staying with us as our guest, started to clear away the débris covering the wall in M-O 14-15,⁸ where he soon discovered remains of a gateway which showed vestiges of eight distinct building periods. The oldest structure proved to belong to Level 5 M. The gateway consisted of two

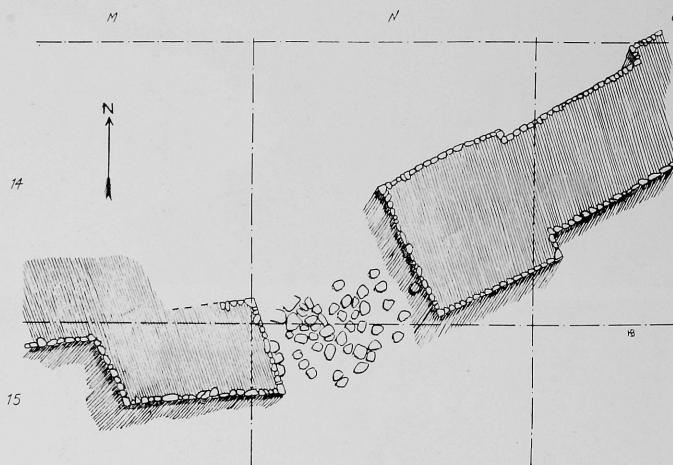


FIG. 212.—PLAN OF THE ORIGINAL SOUTHERN GATEWAY OF THE CITADEL. SCALE, 1:200

towers and a paved passageway (Figs. 212-13). The foundation of this fortification was built with rather carefully set retaining walls 4-5 meters apart with the intervening space filled with earth and stones. At the first alteration of the gateway the floor was raised, and two new retaining walls bordered a ramp leading up to the gateway from the outside (Figs. 214-19). On the floor of this second gateway structure typical Early Bronze Age sherds were found with a strong admixture of the monochrome wheelmade ware belonging to the Hittite period.

In O 10-11 the foundation of the large fortification wall was set above the defense wall of Level 6. Here again we could distinguish two building phases falling within the second main building period (Level 5 M) of the Early Bronze Age (Figs. 220-22; cf. Fig. 209).

When we excavated the foundations of the fortification wall in L-M 11-12 (Fig. 223) we found that the wall there made nearly a right-angle jog (Fig. 224). Building remains in the adjoining plots were very scanty. A circular structure (see Fig. 211) had a stone foundation and a *kerpiç* superstructure. At the floor level beside it a group of loom weights (c 2075) was found. Some of the fragmentary walls in F 14, excavated in 1929, probably belonged to Level 5 M.

⁵ OIP XIX 192-94.

⁷ OIP XIX 194.

⁶ OIP VI 94-97 (Plots 29 and 44).

⁸ See his report in OIP XXIX 290-339.



FIG. 213.—PAVEMENT OF ORIGINAL SOUTHERN GATEWAY (BELOW). JAR d 2494 IS SHOWN (ABOVE) AS FOUND JUST ABOVE THE PAVEMENT AT SPOT MARKED X

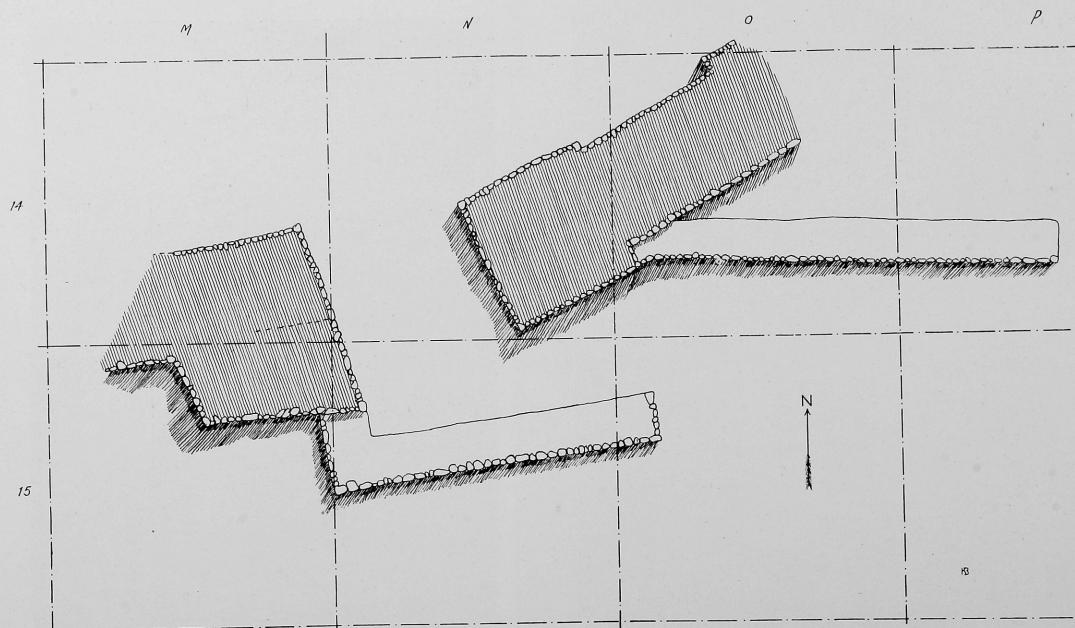


FIG. 214.—PLAN OF THE FIRST REBUILDING OF THE SOUTHERN GATEWAY OF THE CITADEL. SCALE, 1:200



A



B

FIG. 215.—*A*. RETAINING WALL OF RAMP ABUTTING WEST TOWER. *B*. RETAINING WALL OF RAMP ABUTTING EAST TOWER



FIG. 216.—SOUTHERN RETAINING WALL OF RAMP



FIG. 217.—SOUTH WALL OF EAST TOWER, SHOWING FLOOR LEVEL OF FIRST RAMP AND LATER FLOOR LEVELS



FIG. 218.—SOUTHERN GATEWAY OF CITADEL FROM SOUTHEAST



FIG. 219.—VIEW OUTWARD THROUGH SOUTHERN GATEWAY, SHOWING DOOR SOCKET

STRUCTURES ON THE TERRACE

We could distinguish on the city terrace only one very scanty building level of this period (12 T). During 1930 we found in J 22-23, I-J 25, and J 26 walls consisting of the usual low stone foundations with *kerpiç* superstructures (Figs. 225-27). In I 25 a large section of fallen *kerpiç* superstructure remained intact. Skeleton c X6 was found in the southwest corner of

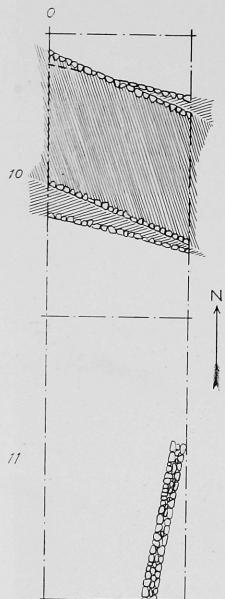


FIG. 220.—PLAN OF LEVEL 5 M IN O 10-11. SCALE, 1:200



FIG. 221.—OUTER FACE OF CITADEL WALL IN O 10-11



FIG. 222.—INNER FACE OF CITADEL WALL IN O 10-11

J 25 (see Fig. 231). In T-U 13 we found the interesting remains of either a retaining wall or the facing of an embankment (cf. Fig. 206).⁹ It was only one stone thick and was inclined toward the east. In A-B 24 we uncovered some scanty building remains, below which was an Early Bronze Age burial (c X16, Figs. 228-29), and in GG-II 9 a few wall remains. Except in these few sections no architectural remains on the city terrace can be ascribed to the Early Bronze Age; but a great number of Early Bronze Age sherds appeared at varying depths nearly everywhere on

⁹ OIP VI 157-58.

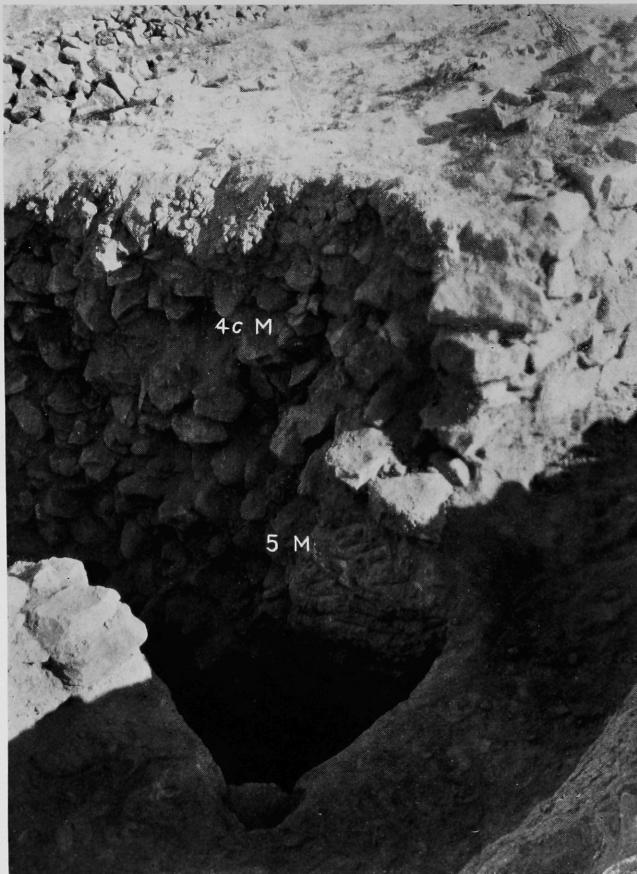


FIG. 223.—CITADEL WALL IN L 11

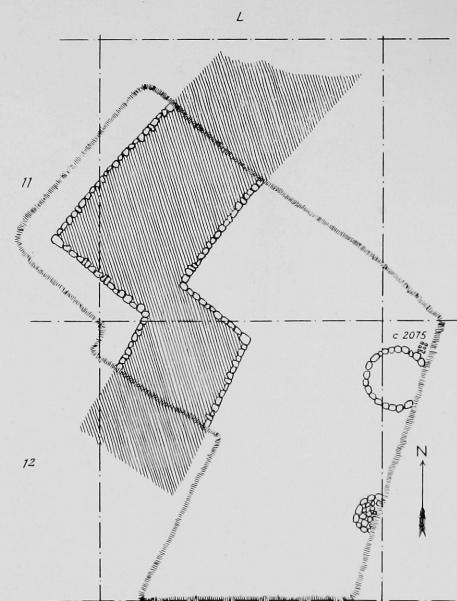


FIG. 224.—PLAN OF LEVEL 5 M IN L-M 11-12. SCALE,
1:200

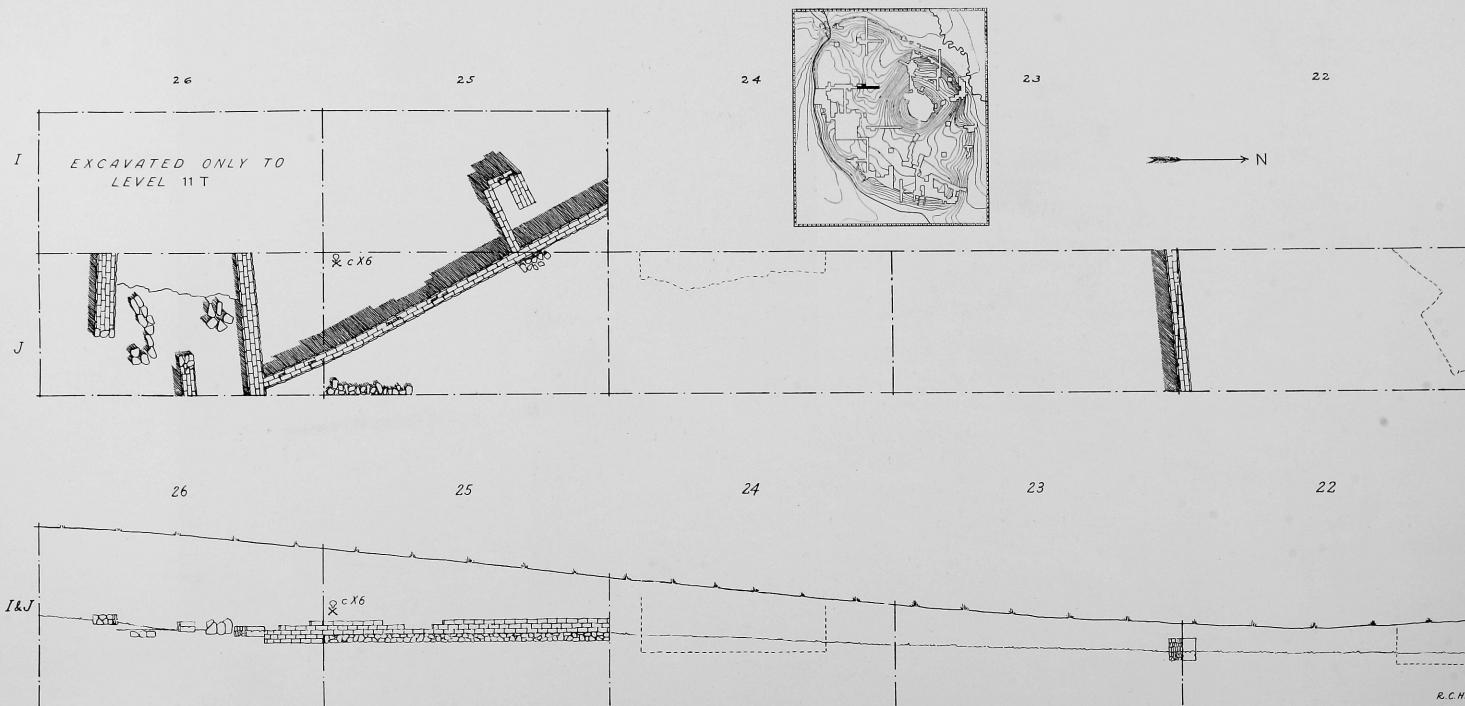


FIG. 225.—PLAN AND CROSS-SECTION OF LEVEL 12 T IN I-J 22-26. SCALE, 1:200

the city terrace. Such finds were especially numerous in A-C 24, L-M 29, S 21-23, S-T 28, DD-EE 19, HH-II 8, and R-S 0-1. In every instance these sherds appeared between the latest Copper Age settlement and the earliest settlement of the Hittite period.

BURIALS

Of the burials found from 1927 to 1932 only four can be definitely attributed to the Early Bronze Age. One was a pot burial, and the other three were simple earth burials. The bodies in all cases were flexed. The mortuary gifts were few. There is actually no difference between



FIG. 226.—AN EARLY BRONZE AGE WALL IN J 22-23. AN OSMANLI WALL APPEARS AT END OF TRENCH

these burials and those of the Copper Age. I think it is probable that burial b X68 also belongs to the Early Bronze Age. Burial b X16, found in S 23, was attributed in 1929 to this period:¹⁰ but it must be of later date, as additional excavations in S 21-23 in 1932 have proved that its position was above the wall remains of the Hittite period.

For the craniological material see *OIP XXX*.

LIST OF BURIALS

b X15 Earth burial in S 23 (*OIP XIX* 210-12; *OIP XX*, Tables I-II). The skeleton of an adult male was in a dorsal position with the skull toward the southeast. The right arm was bent at about a right angle, the hand lying over the ribs. The left arm was extended along the side, the hand being near the left *caput femoris*. Both legs were flexed toward the left side.

¹⁰ *OIP XIX* 210 and 212.



FIG. 227.—AN EARLY BRONZE AGE WALL IN I-J 25

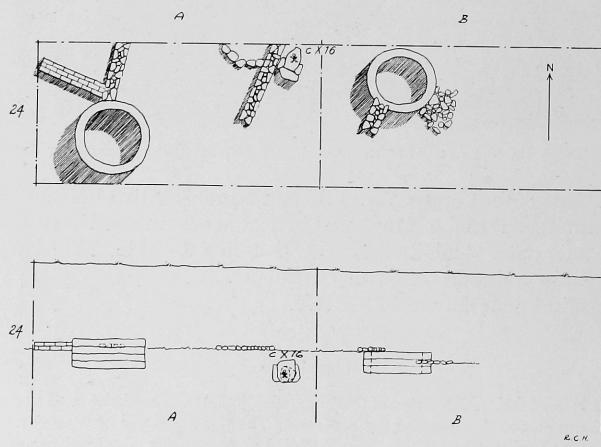


FIG. 228.—PLAN AND CROSS-SECTION OF LEVEL 12 T IN A-B 24. SCALE, 1:200



c 1275

FIG. 229.—REMAINS IN A-B 24, FROM EAST, AND CLOSE-UP OF BURIAL C X16. THE MORTUARY GIFT IS SHOWN IN ACTUAL SIZE



FIG. 230.—BURIAL b X17 IN S 23

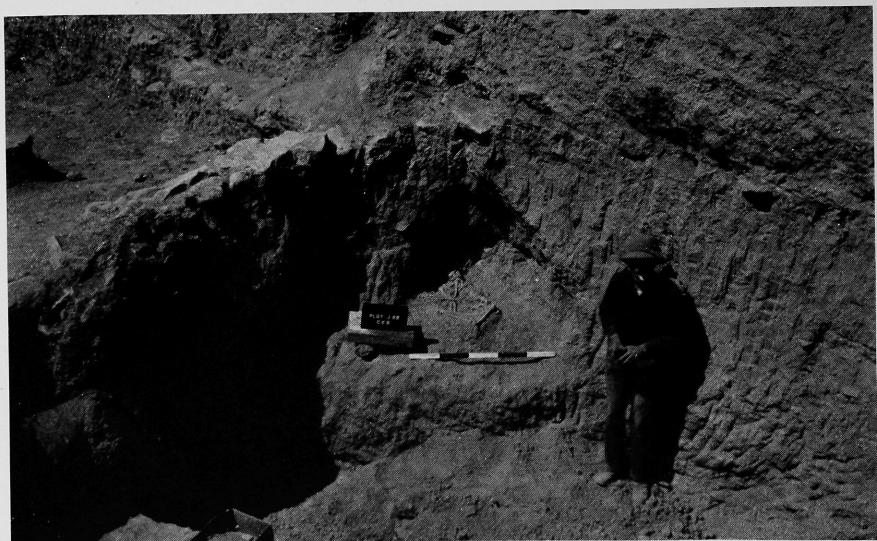


FIG. 231.—BURIAL c X6 IN J 25



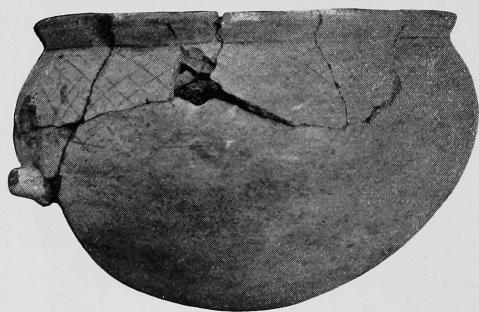
5 (= Pl. IV 9)

6

FIG. 232.—INTERMEDIATE WARE SHERDS. ACTUAL SIZE



c 2264

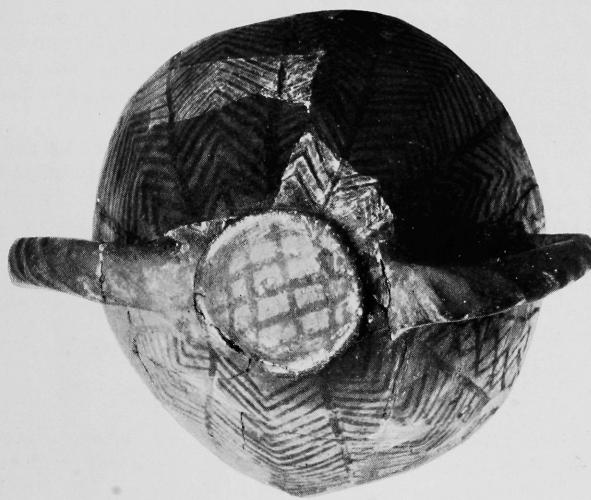


d 138



d 1999

FIG. 233.—INTERMEDIATE WARE VESSELS. SCALE, 2:5



c 2264

FIG. 234.—INTERMEDIATE WARE VESSEL. SCALE, 2:5

- b X17 Earth burial in S 23 (Fig. 230; *OIP* XIX 212). The skeleton of an adult female(?) was in a ventral position, the skull lying on the right side toward the southeast. Both arms were flexed, and the legs were flexed toward the left side. A smooth oval stone was about .04 from the occipital bone. It may have found its way there by chance or as a missile, or it may have been placed there as a mortuary gift (cf. e X4 of the Copper Age, p. 150).
- b X68 Pot burial in DD 19 (*OIP* XIX 78). The skeleton of an adult male, deposited in a large jar, lay on its right side, flexed, with the skull slightly east of south. A copper or bronze pin was a mortuary gift. This burial was found in a refuse layer with sherds of the Early Bronze Age, of the Copper Age, and of the Hittite period. Dr. Schmidt thinks it possible that it belonged to the Copper Age or to the period of the Hittite Empires, whereas, judging from the description of the burial jar, I am inclined to attribute it to the Early Bronze Age. In shape, paste, and execution the jar of this burial seems to be of the same type as the burial jar (c 2262) of c X16. The form of the burial jar of b X68 resembles that of e X3, a Copper Age burial (cf. p. 150), but the jar of e X3 is of coarser paste and execution.
- c X6 Earth burial in J 25 (Fig. 231; *OIP* XX, Tables I-II). The skeleton of a juvenile male lying on its right side, flexed, was found 2.60 below the surface in the refuse layer of the Early Bronze Age building level. The direction from sacrum to atlas was 25° east of south. The right arm was extended along the side, while the left lay across the body with bent elbow.
- c X16 Pot burial in A 24 (Fig. 229; *OIP* XX 130 and Tables I-II). The skeleton of an adult male was found 4 meters below the surface under a very scanty building layer probably belonging to the Early Bronze Age. The skeleton lay on its right side, flexed, the skull upright. The direction from sacrum to atlas was 10° east of south. The large burial jar (c 2262, Fig. 245) had two small handles on its shoulder. It had a bearing of 10° east of south and a dip of 10°, orifice up. The orifice was boxed in with large stone slabs. A fine bowl (c 1274, Fig. 237), standing on edge near the orifice of the burial jar in front of the hands and near the neck of the skeleton, and a bronze or copper pin (c 1275) were mortuary gifts.

POTTERY

The typical pottery of the Early Bronze Age is handmade. Only a few sherds were found which could possibly have been made on a wheel. The paste is sometimes grit-tempered but usually plant-tempered. The ware of this period shows buff slips of varying shades and finish with geometrical designs in dark brown or dark brown and brownish red, sometimes on a white panel. The ornamentation is usually in mat finish but sometimes in shiny finish. The firing varies greatly. A finer pottery similar to this is found at Kültepe, and a few specimens of such fine ware were found at Alişar.

Another type of painted ware, which appears at the end of the Copper Age and the beginning of the Early Bronze Age, is called for convenience "intermediate." It is handmade, mostly finer and better fired than the typical Early Bronze Age ware, and usually grit-tempered. It generally has a reddish buff slip and linear designs in purplish brown.

Though a great many sherds of both wares were found, there were few complete vessels. The typical forms in both wares are bowls with rims curved inward, sometimes with handles; one-handled cups, the handle usually large; and large ovoid jars with two or four handles (this last not found so far in the intermediate ware).

PLAIN WARE

The plain ware of this period is in most cases very difficult to distinguish from that of the Copper Age. Nevertheless, the slip is usually a much lighter yellowish red and by no means as carefully applied and polished as the rich red slip of the Copper Age. The large jars used for burials, though nearly identical in material and finish with a certain type prevalent in the Copper Age, are a little better.

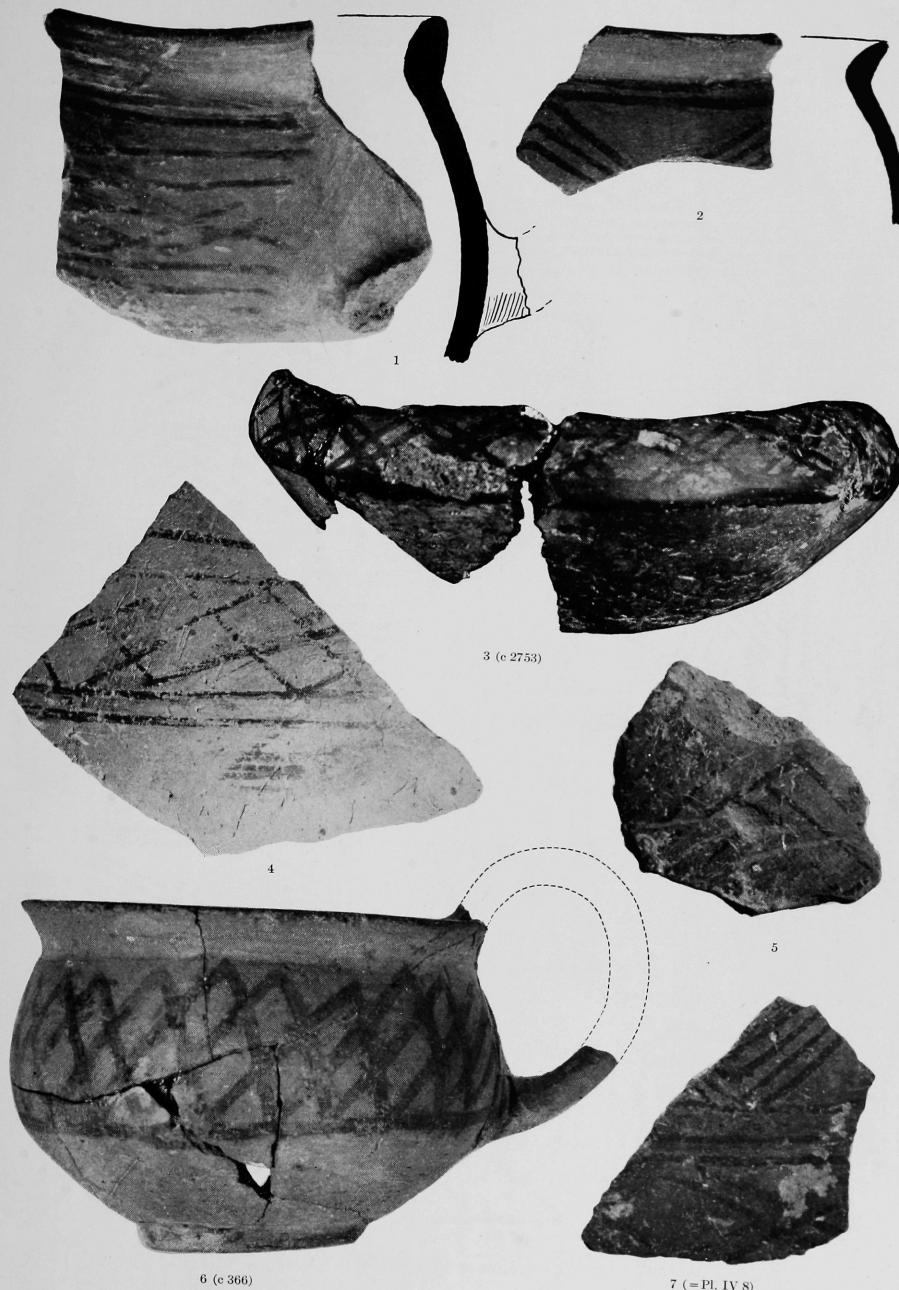


FIG. 235.—INTERMEDIATE WARE VESSELS AND SHERDS. ACTUAL SIZE

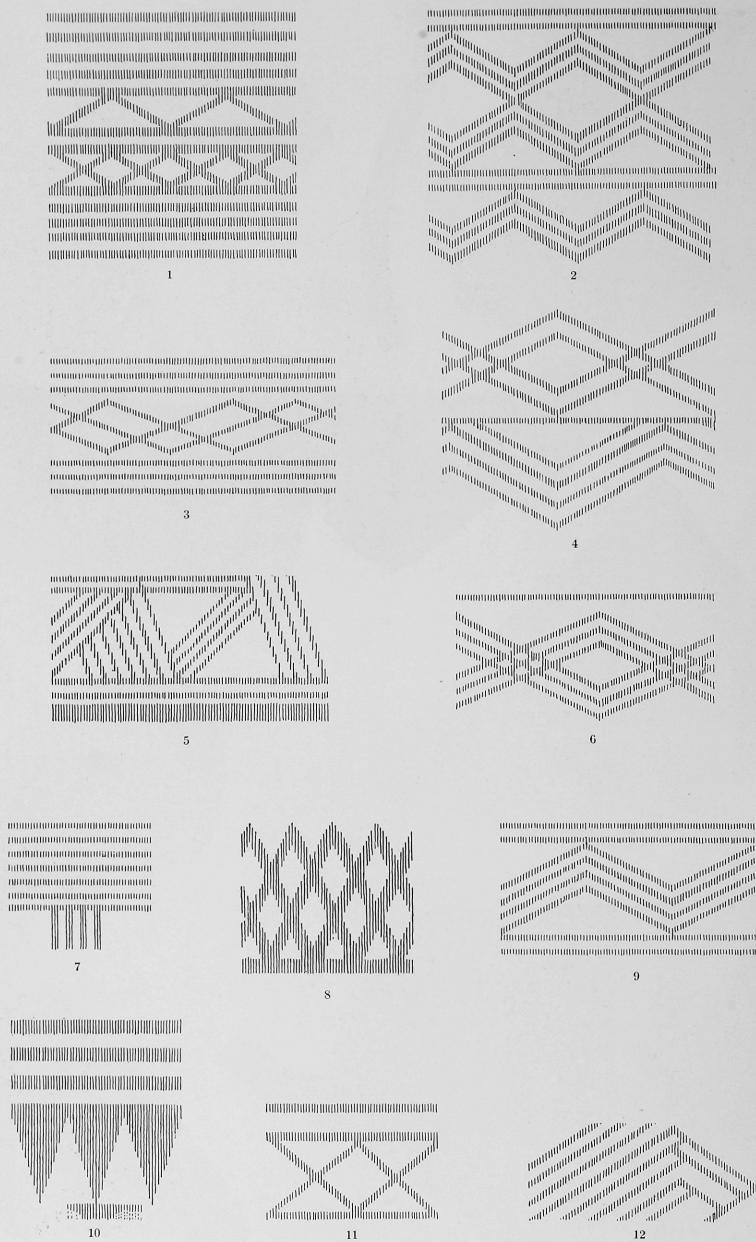


FIG. 236.—TYPICAL DECORATIVE MOTIVES ON INTERMEDIATE WARE



FIG. 237.—BOWLS OF TYPICAL EARLY BRONZE AGE WARE. SCALE, 1:3

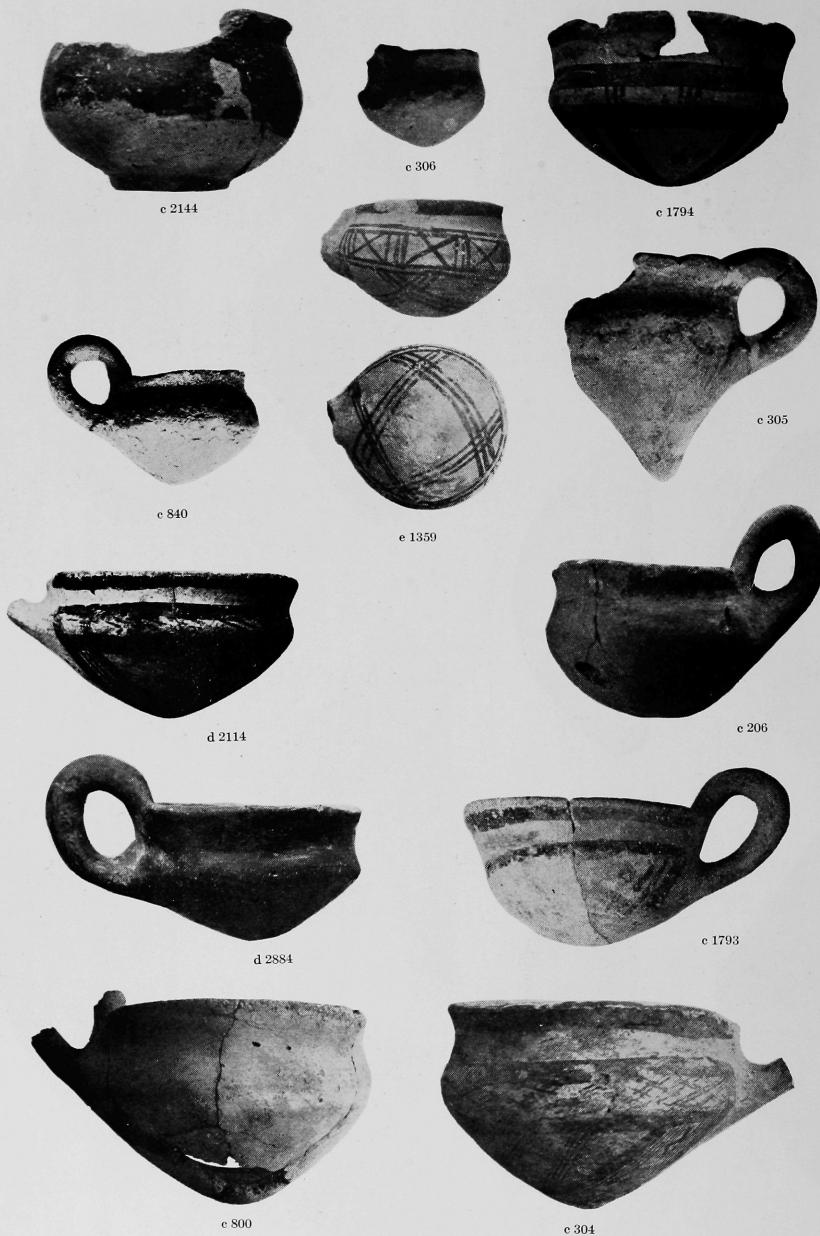


FIG. 238.—CUPS OF TYPICAL EARLY BRONZE AGE WARE. SCALE, 1:2



FIG. 239.—CUPS AND A BOWL OF TYPICAL EARLY BRONZE AGE WARE. SCALE, 1:2

DECORATED WARE

The great majority of vessels and sherds found in the cultural deposits of this period showed painted geometrical designs. Only one vessel with relief ornamentation was found. The painted ware is divided into two main groups: the typical Early Bronze Age ware and the earlier ware called "intermediate."



FIG. 240.—RESTORED CUP. SCALE, 1:2

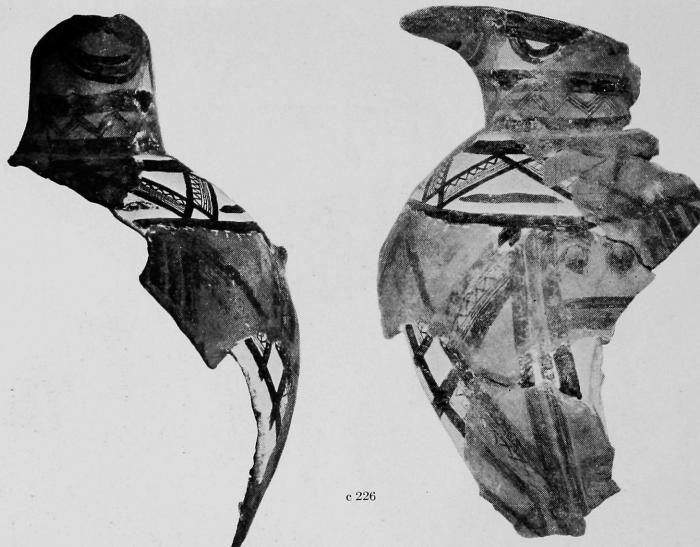


FIG. 241.—PITCHER. SCALE, 1:5

Intermediate ware (Pl. IV 8-9 and Figs. 232-36) appeared sporadically in the last building level of the Copper Age and was found side by side with typical Early Bronze Age ware in the first building level of that period. The paste is well levigated and usually finer than in typical Early Bronze Age ware; grit-tempering seems to be preferred, although plant-tempering also appears; and the firing is generally better. The slip is reddish buff in varying shades, highly polished or burnished. The decoration consists of linear designs in varying shades of purplish brown; lozenges, chevrons, and zigzag lines predominate.

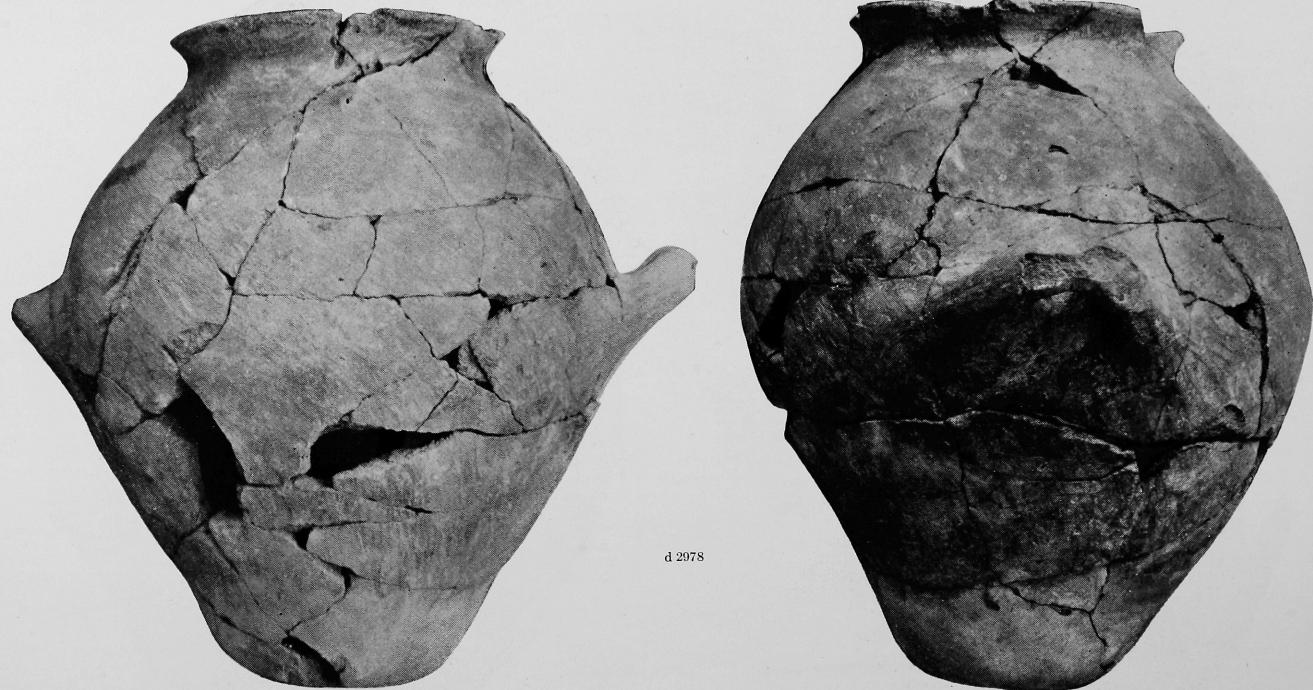


d 2494



e 2325

FIG. 242.—JARS. SCALE, 1:3



d 2978

FIG. 243.—JAR. SCALE, 1:3



d 2993

FIG. 244.—JAR. SCALE, ABOUT 1:3

The paste of the typical Early Bronze Age pottery of Alişar is usually much coarser than that of the intermediate pottery. Both grit- and plant-tempering appear, but plant-tempering seems to have been preferred. Three subdivisions may be differentiated. The first has a red to reddish buff slip, usually not too well polished, with dark brown to black geometrical designs (e.g., Pl. V 1 [=Fig. 263 4] and 3). The second group has a lighter, more yellowish buff slip, again not too well polished, with geometric ornamentation in dark brown to black and dark red to reddish brown (e.g., Pl. VI 1 [=Fig. 249 8], 4 [=Fig. 269 16], and 6 [=Fig. 266 8]). A few sherds with similar slips have a geometric design in reddish brown only. The third group has

a reddish slip on which there is a cream-colored panel, usually framed with dark brown to black lines; on this light panel dark brown and brownish red geometrical designs appear (e.g., Pl. VI 2 [=Fig. 269 1] and 5 [=Fig. 256 9]).



FIG. 245.—BURIAL JAR. SCALE, 1:10



FIG. 246.—FRAGMENT OF A VESSEL WITH CUP-BASE. SCALE, 1:2

I am inclined to consider a few pieces of a finer ware of the same general character as an importation from a neighboring pottery center. On these pieces appear most of the examples of decoration in shiny finish (Pl. V 4 [=Figs. 250 15 and 257 6] and 5). The brown to black geometric design is carefully applied on the highly polished slip. The paste is different from the local paste, which nearly always shows some admixture of mica. Similar pottery is well known from Kültepe.

The decorative elements are few and in themselves very simple, but they are limitless in their possibilities of combination (Figs. 256-69).¹¹ Far the most common are linear elements such as chevrons, zigzag bands, lozenges, and wavy lines. Small spirals or hooks may be combined with such designs, appearing frequently below the handle (e.g., Figs. 247 1-2, 255 1-2, and 257 8 [=250 9]). Swastikas appear (e.g. Fig. 269, 22), as well as a cross-shaped design (Fig. 269 15-17). Of special interest is the appearance of a wheel design on a typically Early

¹¹ The designs in Figs. 265-69 have been somewhat schematized.

Bronze sherd (Fig. 258 7 [= Fig. 264 7]). On the Alişar mound so far no anthropomorphic or animal designs have been found which belong unquestionably to this period.¹²

The combined elements either form continuous wide bands or are arranged in metope fashion, separated by vertical broad bands of solid color or by combinations of narrower straight or wavy lines. Typical Early Bronze Age bowls show an ornamented band running around the rim. Sometimes vertical panels extend from this decorated strip to the bottom; if the bowl has handles the panels are usually set at the sides of the handles. Cups have decorated bands or panels just at or above the median body; from these, bands usually extend

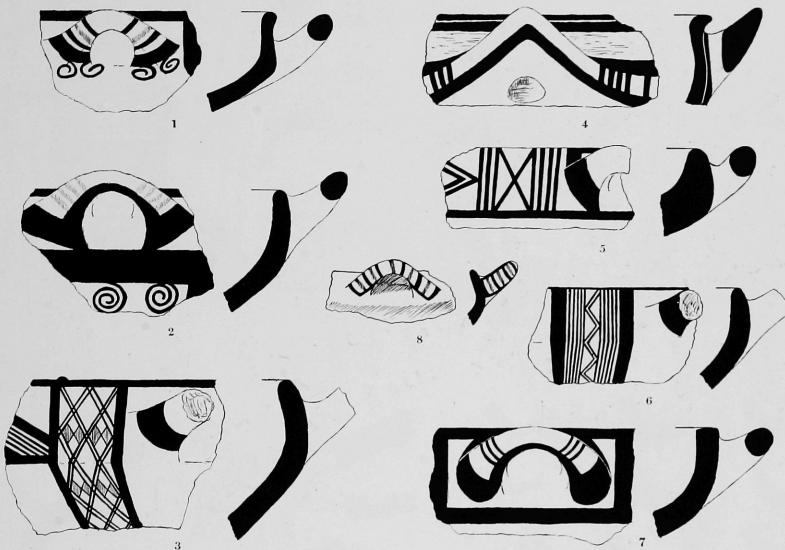


FIG. 247.—RIMS AND HANDLES. SCALE, 1:3

to the bottom. Large jars have geometrical all-over designs. The rims are mostly accentuated by two dark brown to black bands, one on the inside and one on the outside, the edge often being decorated with dark brown or reddish brown dashes.

Slips of two shades also were used to create a decorative effect. Most often a reddish slip covered the interior and lapped over the rim to form a stripe on the outside. The rest of the outside was covered with a lighter, often whitish slip. In one case only (c 1274, Fig. 237) was relief ornamentation found; four sets of three vertical ridges are attached equidistantly on the rim of the bowl.

FORMS

The forms of both the intermediate and the typical Early Bronze Age ware are essentially the same: the most common are bowls with rims curved inward (with or without lateral

¹² In *OIP* XIX 201 Dr. Schmidt attributes three sherds with anthropomorphic designs to this period. I am not familiar with the circumstances of the discovery of Nos. b 419a-b. No. 72 was found in 1927 while we were excavating on the southern slope of the western spur of the citadel mound, and, as it was found in a very much disturbed refuse deposit, I do not dare to attribute it to this cultural period; I prefer to attribute all three sherds to the Post-Hittite-Phrygian period (cf. *OIP* XXIX, Fig. 463.)

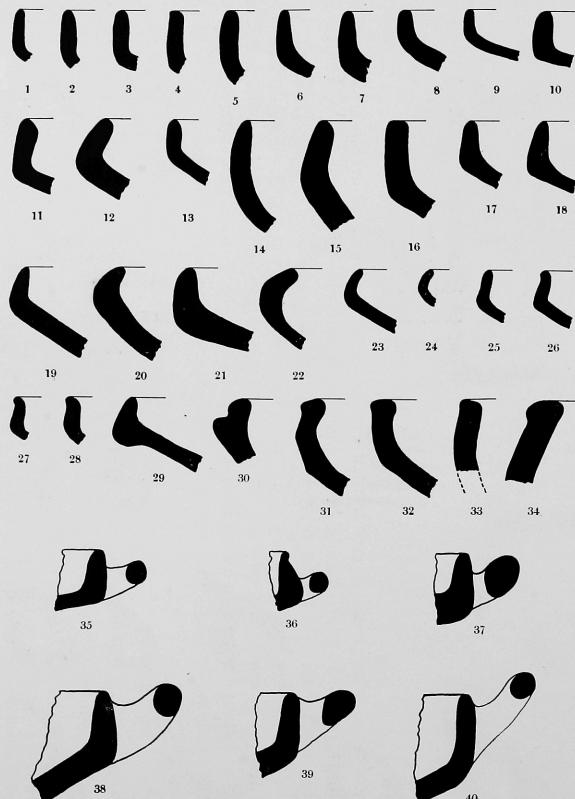


FIG. 248.—RIMS AND HANDLES. SCALE, 1:3

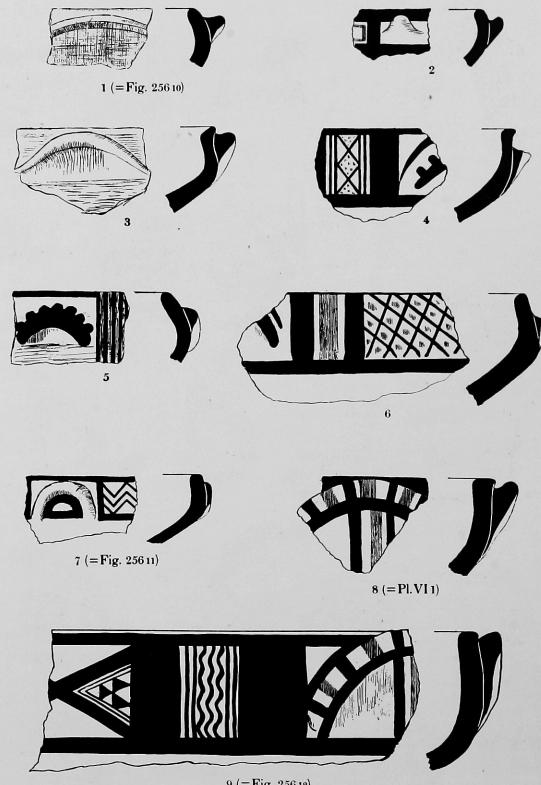


FIG. 249.—RIMS AND HANDLES. SCALE, 1:3

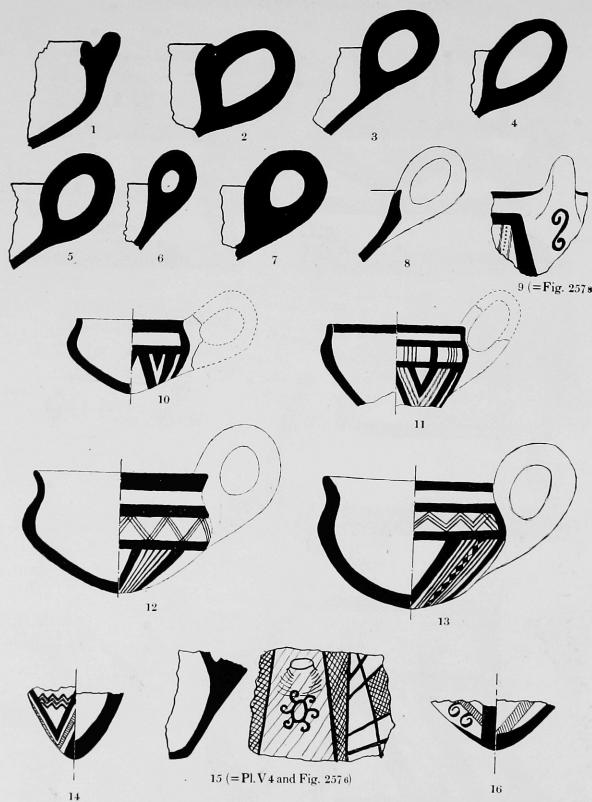


FIG. 250.—CUPS AND FRAGMENTS OF CUPS. SCALE, 1:3

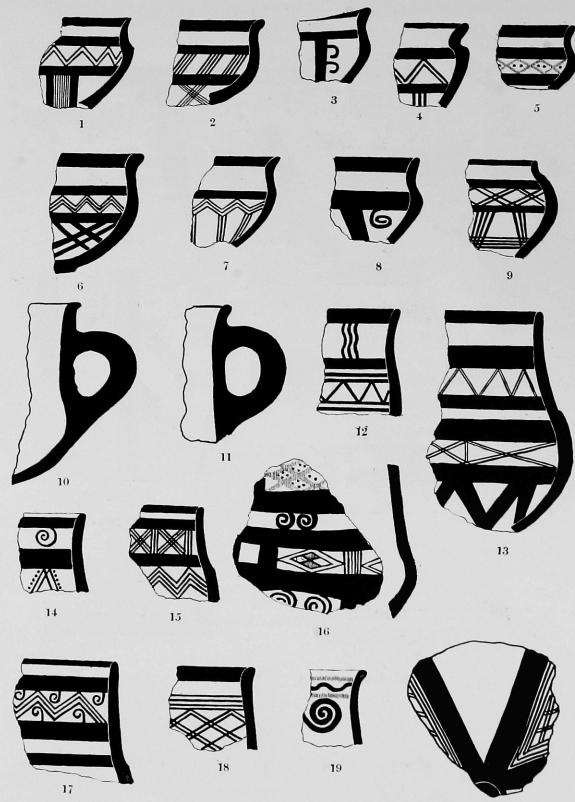


FIG. 251.—FRAGMENTS OF CUPS. SCALE, 1:3

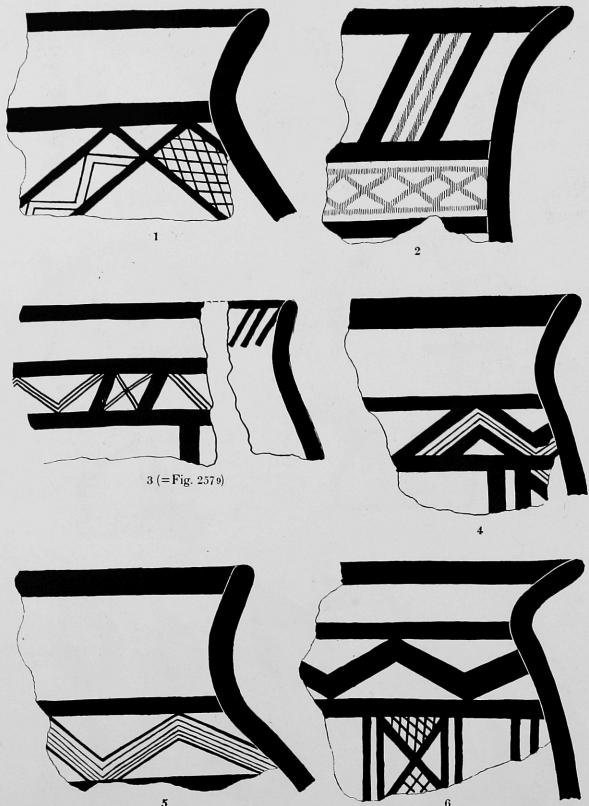


FIG. 252.—RIM PIECES OF LARGE JARS. SCALE, 1:3

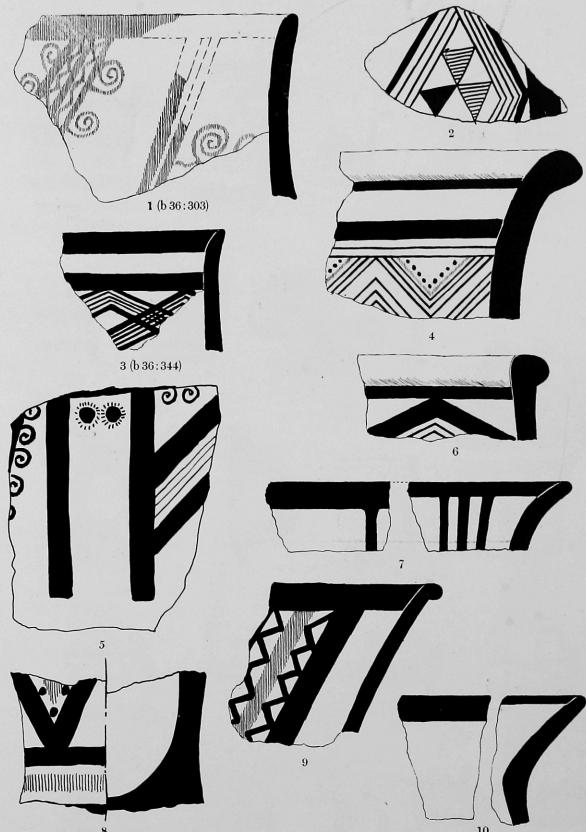


FIG. 253.—RIM AND BODY PIECES OF LARGE JARS. SCALE, 1:3



FIG. 254.—HANDLES OF LARGE JARS. SCALE, 1:3



FIG. 255.—HANDLES AND SPOUTS. SCALE, 1:3

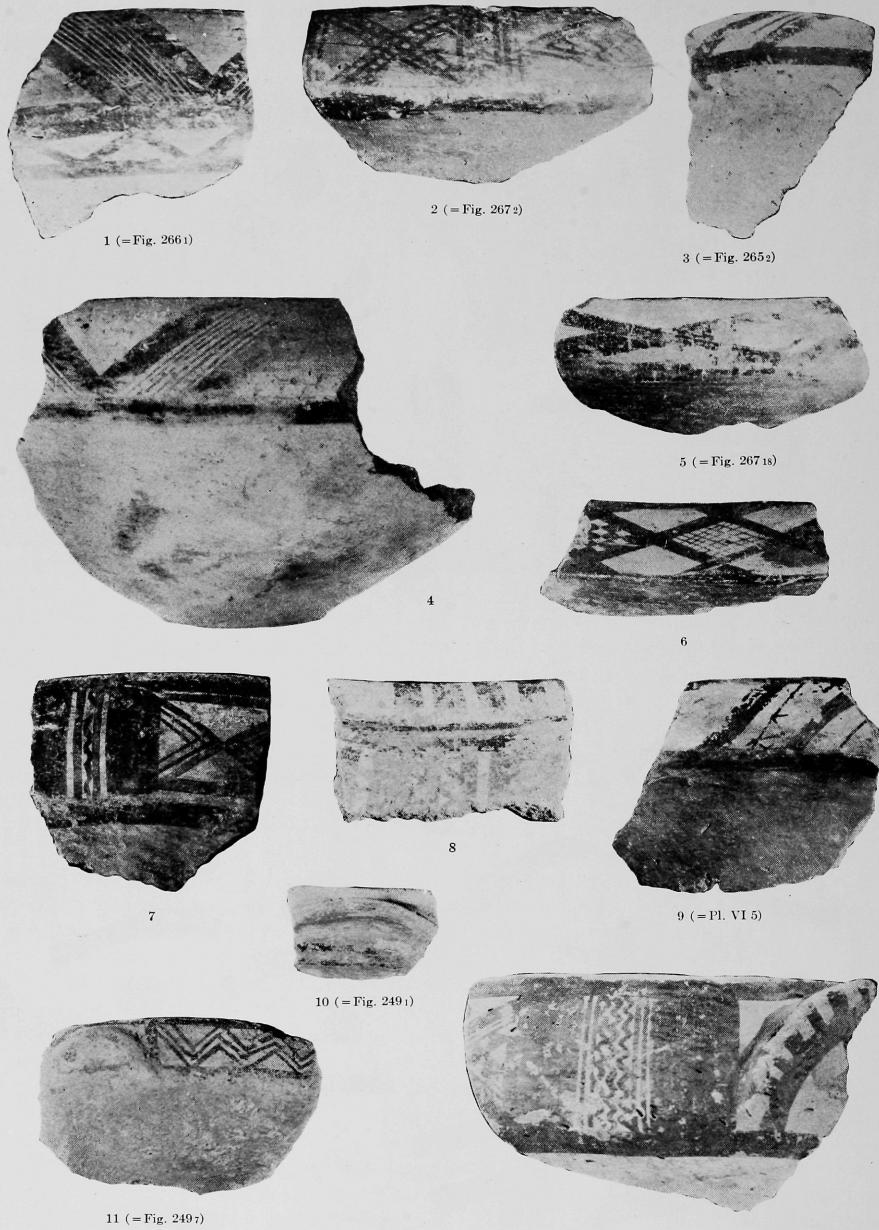


FIG. 256.—PAINTED SHERDS. SCALE, 1:2

handles), cups with flat or pointed bottoms, and a certain type of large jar. In addition to these the intermediate ware has a few special forms.

Most of the bowls of both the intermediate and the Early Bronze Age wares show a definite shoulder and a flattish bottom (Figs. 235 and 237 and No. c 1795, Fig. 239). The rims are contracted or rise vertically from the shoulder (see Fig. 248 1-26). Less frequently rims which roll outward or carinated rims appear (see Fig. 248 27-34). The rims are usually decorated by a band of geometric designs or by having the darker interior slip overlap to the shoulder break. In several cases panels extend from the decorated rim to the bottom. The larger bowls of the Early Bronze Age not infrequently have lateral handles of a more or less triangular shape (see Figs. 247 and 248 35-40). Sometimes the handles are crescent-shaped and lie flat on the rim (see Fig. 249).

Although the cups of the two wares show some similarity in form, the intermediate ware cups are more like those of the Copper Age (cf. Fig. 168) than like those of the Early Bronze Age. The intermediate ware cups (e.g., c 366, Fig. 235) have somewhat rounder bodies than those of the typical Early Bronze Age ware, and their bottoms are usually flat, sometimes concave in the middle.

The typical Early Bronze Age cups (Figs. 238-40) may be divided into two groups. The first has a short rim, slightly curved outward, a high handle from lip to shoulder, and a pointed or rounded bottom (e.g., c 840 and c 206, Fig. 238). Sometimes the pointed bottom is truncated. The second group has a high cylindrical neck and one handle which extends from the middle of the neck to the shoulder (e.g., c 1007 and d 2112, Fig. 239). Most of the cups have a broad band of solid color at the orifice, both inside and outside, and a band of geometric designs at the greatest body diameter. From this decorated band other decorated bands frequently extend downward, meeting at the bottom. The cups with cylindrical necks often have geometrical ornamentation on the neck. An exceptional piece is a double cup, No. c 1161 (Fig. 239), with a small perforation to permit fluids to flow from one cup into the other.

No. c 226 (Fig. 241) is a fragmentary large pitcher with a beak-spout. Several fragments of such spouts have been found.

The typical Early Bronze Age jar (Figs. 242-43) has a nearly oval body with a short rim curved outward and two or four horizontal or vertical handles. The body is usually covered with geometric designs. Another type of jar has a longer neck, flaring at the top (Fig. 244; cf. Figs. 252-53).

It is very hard to differentiate the large storage jars of this period from those of the Copper Age, for they have in general the same form as the Copper Age type represented by No. e 686 (Fig. 172). They usually have two relatively small handles on the shoulder (e.g., c 2262, Fig. 245).

Three unusual vessels of intermediate ware are shown in Figures 233-34. No. d 138 has a wide orifice, a short, sharply offset rim, and two small vertical handles (broken) at the greatest body diameter. No. d 1999, with a high cylindrical neck, probably had a spout at the median body. Most interesting was the somewhat bell-shaped vessel c 2264. Two vertical, twisted handles extend from a little above the median body to the base. The whole exterior is covered with geometric ornamentation. The protuberances at the rim are the upper ends of two enclosed channels which reach to the bottom of the vessel and through which a liquid could be sucked. No. c 491 (Fig. 246 and Pl. IX) is a fragment of an Early Bronze Age vessel which seemingly had a high cup-base. Its reconstruction could be attempted because a complete vessel of this type is known.¹³

¹³ H. Frankfort, *Studies in Early Pottery of the Near East II* (London, 1927) Pl. IX 1.

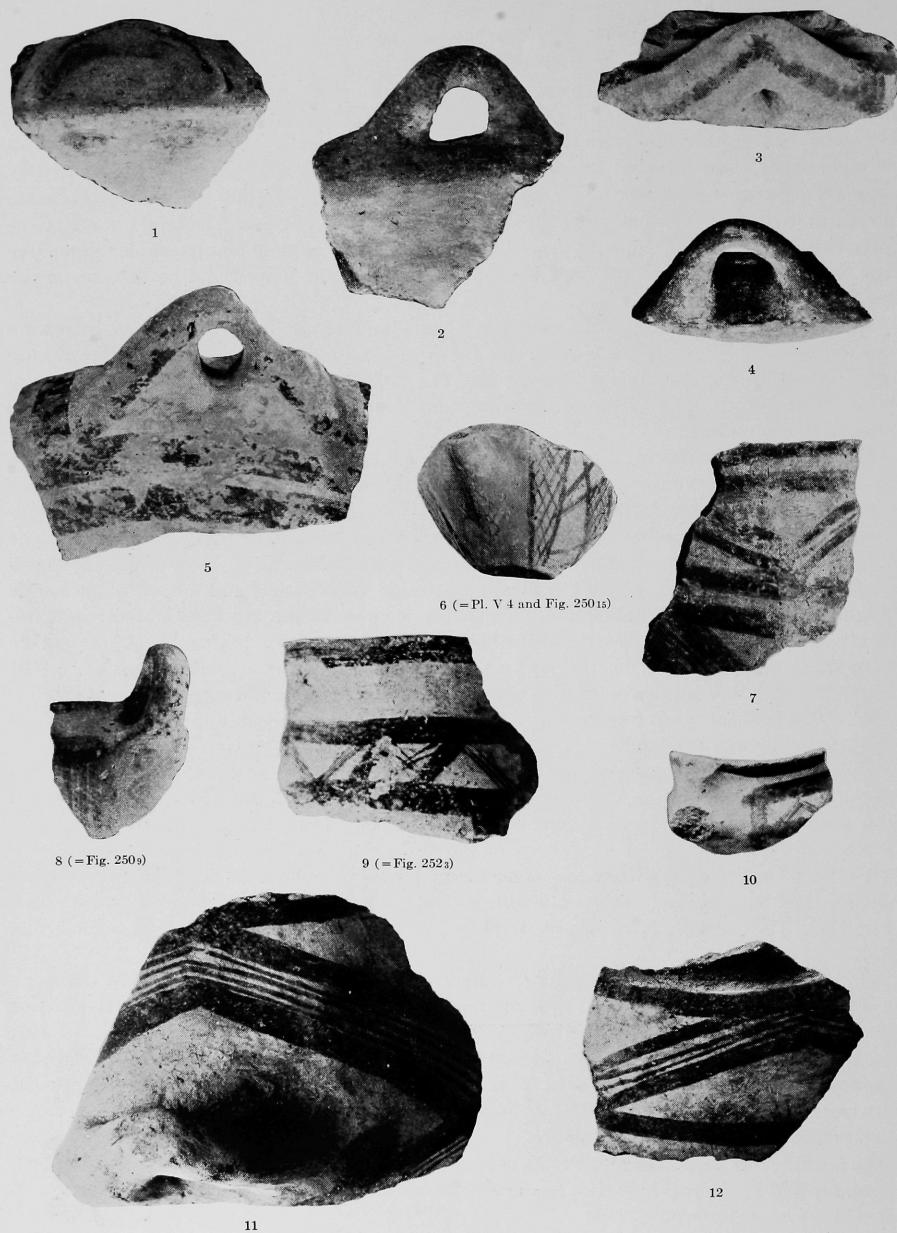


FIG. 257.—PAINTED SHERDS. SCALE, 1:2

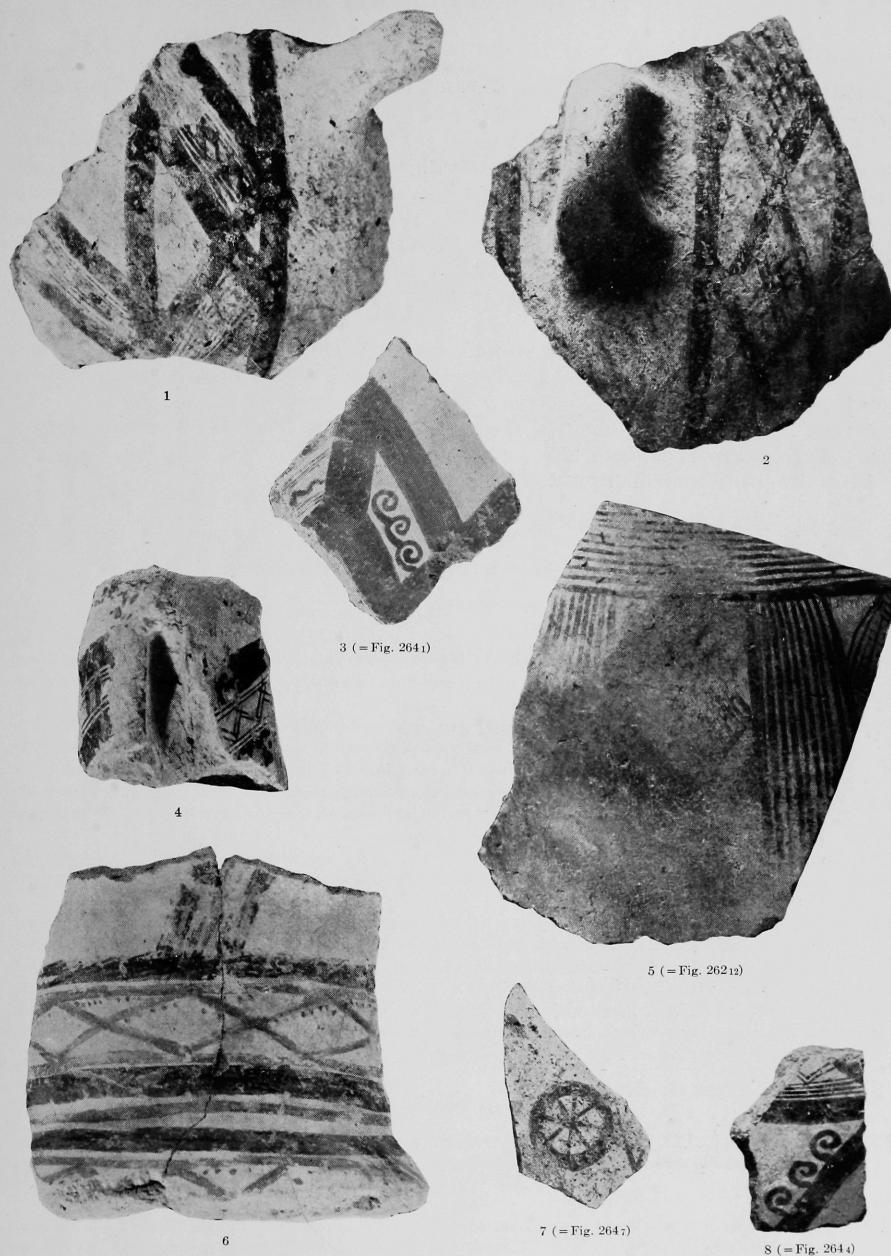


FIG. 258.—PAINTED SHERDS. SCALE, 1:2

DETAILS

Simple rims are predominant (Figs. 247-53). The rim is sometimes straight, but usually curved; sometimes it is rolled slightly, either outward or inward.

Crescent-shaped handles lying flat on the upper body are frequent on bowls (Fig. 249). Roughly triangular handles are applied horizontally on bowls and jars (Figs. 243-44, 247-48, and 254), and vertical handles appear on jars (e.g., d 2494, Fig. 242). The cross-sections are generally circular or oval (Figs. 247-48 and 254). Most of the cup handles are large and rise higher than the orifice (Figs. 238-39 and 250). Usually they extend from the lip to the shoulder or greatest body diameter. The cross-sections are usually circular or oval. Intermediate ware cups sometimes have band handles, similar to those typical of the Copper Age, and sometimes handles with triangular cross-section.

For bowls and jars a flattish bottom is usual. Cups have either rounded or pointed bottoms, sometimes with a small concavity at the center. Vessels of intermediate ware sometimes have ring bases.

Several fragmentary beak-spouts of the type of No. c 226 (Fig. 241) were found. Other types of spouts appear in Figure 255.

Decorative motives are illustrated in Figures 256-69.

DESCRIPTIONS OF INDIVIDUAL VESSELS¹⁴

INTERMEDIATE WARE

- c 366 (Fig. 235 6 and Pl. IX). Cup .057 h., .086 d.; fine, grit-tempered, very well made ware; reddish paste with gray core; heavily fired; slip over all, varying from red to grayish buff due to firing; geometric design in purplish brown on upper half of body and inside of rim. Found while digging a cut for the narrow-gauge railway on the slope of the citadel mound.
- c 2264 (Figs. 233-34 and Pl. IX). Large bell-shaped vessel with two spirally twisted handles from base to a little above median body, .205 h., .245 d.; between the handles at the top appear two spouts .02 long, with apertures about .003 in diameter, the ends of tubes or inclosed channels which reach to the bottom of the vessel; coarse, plant-tempered, very well made ware; reddish paste with thick gray core; moderately fired; reddish buff slip with purplish brown geometrical design all over the outside. Found 10.20 deep in L 12.
- c 2753 (Fig. 235 3 and Pl. IX). Fragmentary bowl .041 h., .118 d.; fine, grit-tempered, well made ware; buff paste; moderately fired; yellowish buff slip over all with a decorated band in purplish brown around rim. Found 10.20 deep in L 12.
- d 138 (Fig. 233 and Pl. IX). Vessel with two small vertical handles, .140 h., .200 d.; medium, grit-tempered, very well made ware; buff paste with gray core; moderately fired; highly polished red slip over interior; light yellowish red slip over exterior from rim to bottom; purplish brown gridiron pattern around upper part of body. Found 3.50-4.00 deep in W 24.
- d 1999 (Fig. 233 and Pl. IX). Vessel which probably had a spout on median body, .150* h., .135 d.; medium, plant-tempered, very well made ware; buff paste; moderately fired; reddish buff slip with purplish brown geometric design. Found 10.50-11.00 deep in O 10-11.

TYPICAL EARLY BRONZE AGE WARE

- c 206 (Fig. 238 and Pl. IX). Cup .051 h., .076 d.; medium, grit-tempered, well made ware; buff paste; moderately fired; buff slip over outside; faint traces of a geometric design from rim to bottom. Found 4.20 deep in M 29.

¹⁴ Only vessels found from 1930 to 1932 are enumerated here. Vessels of the intermediate and Early Bronze Age wares found in previous seasons are described in *OIP* VI 260-62 and *OIP* XIX 194-203. Drawings of typical forms from the excavations of 1927-32 are given in Pl. IX.

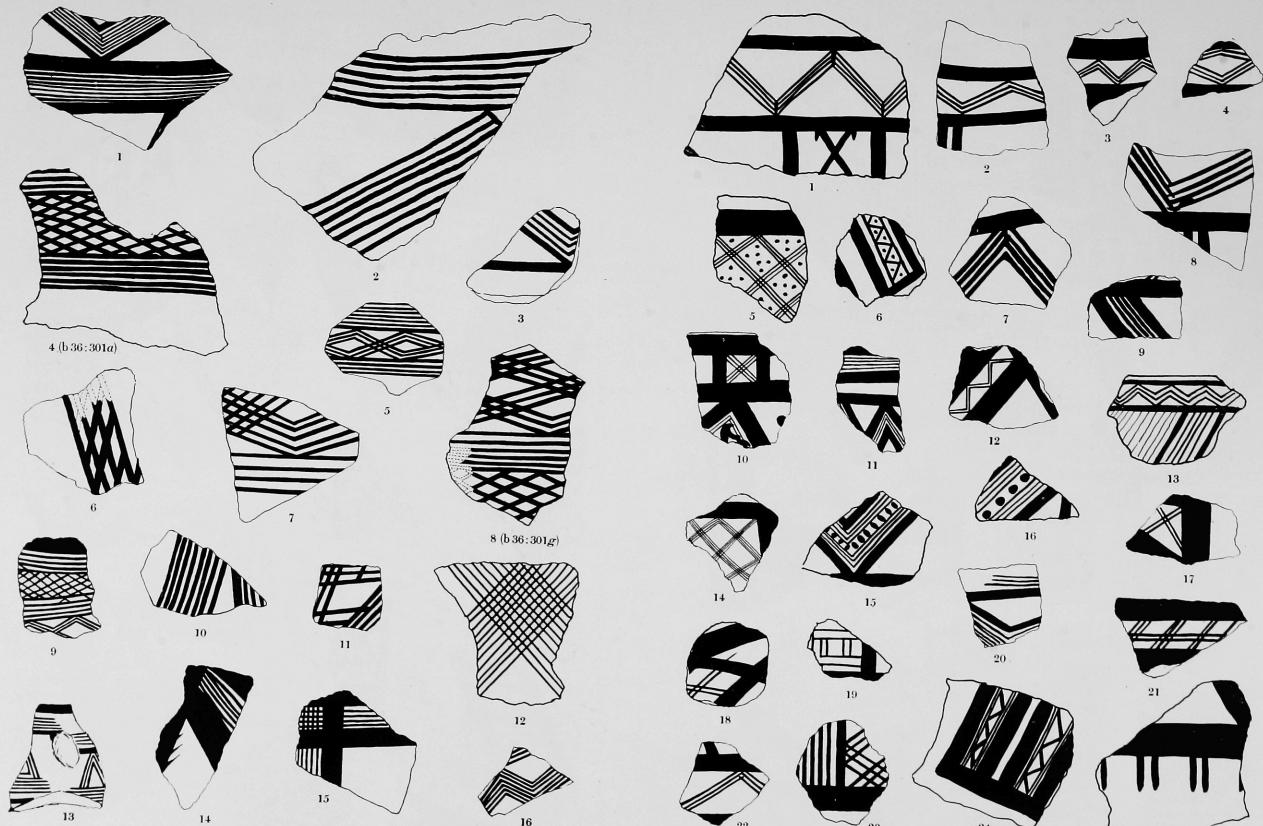


FIG. 259.—PAINTED SHERDS. SCALE, 1:3

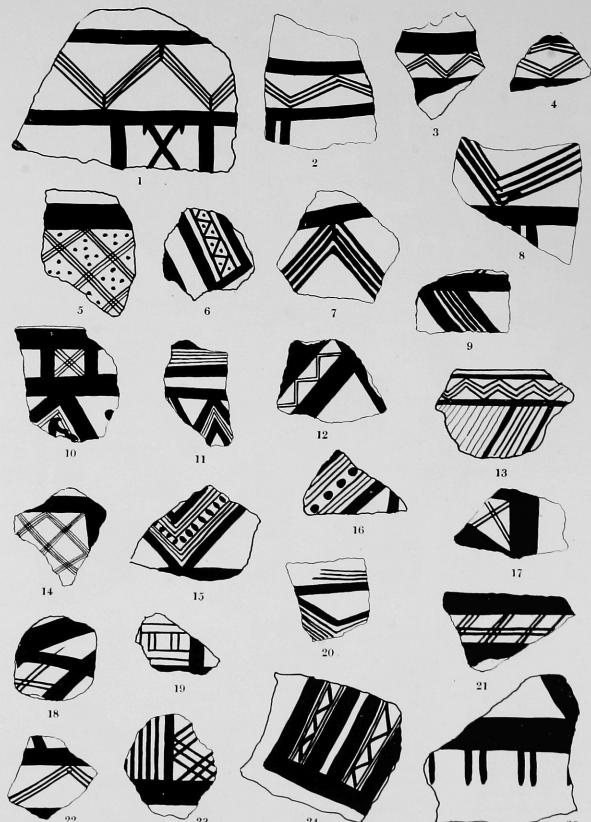


FIG. 260.—PAINTED SHERDS. SCALE, 1:3

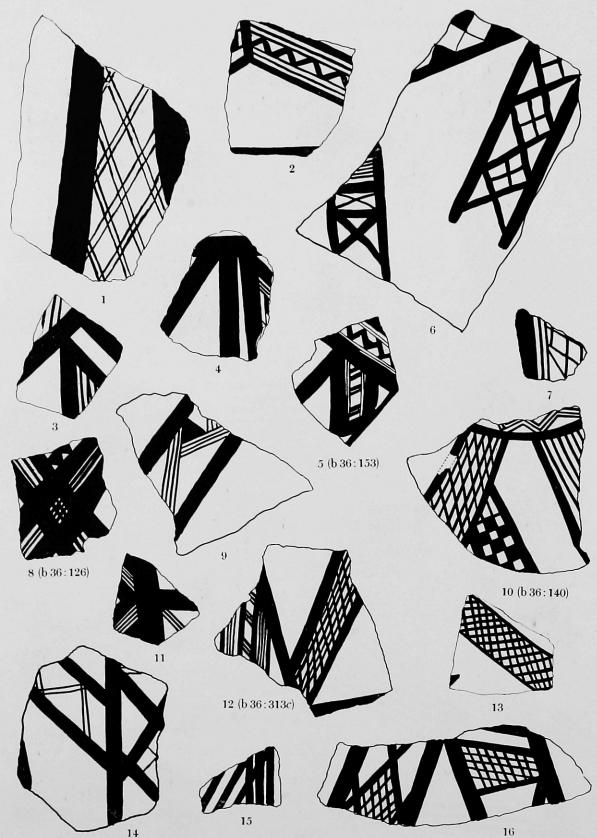


FIG. 261.—PAINTED SHERDS. SCALE, 1:3

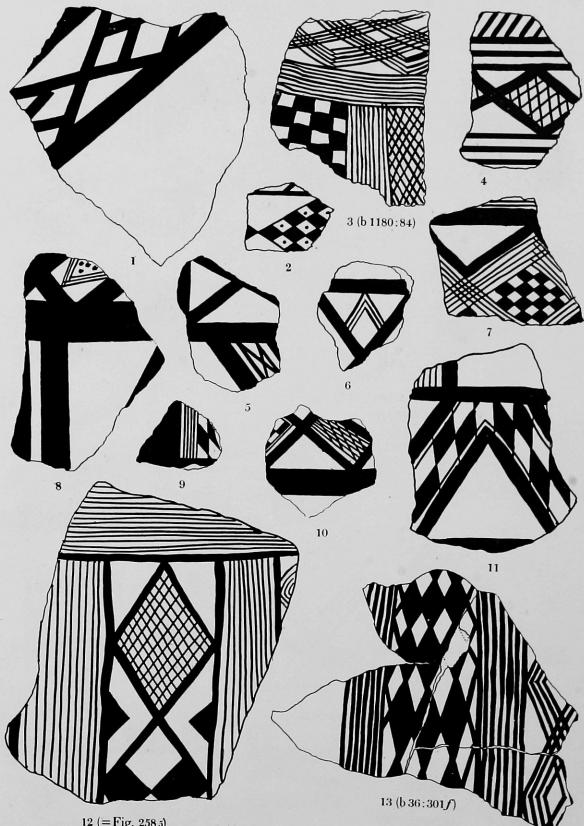


FIG. 262.—PAINTED SHERDS. SCALE, 1:3



FIG. 263.—PAINTED SHERDS. SCALE, 1:3

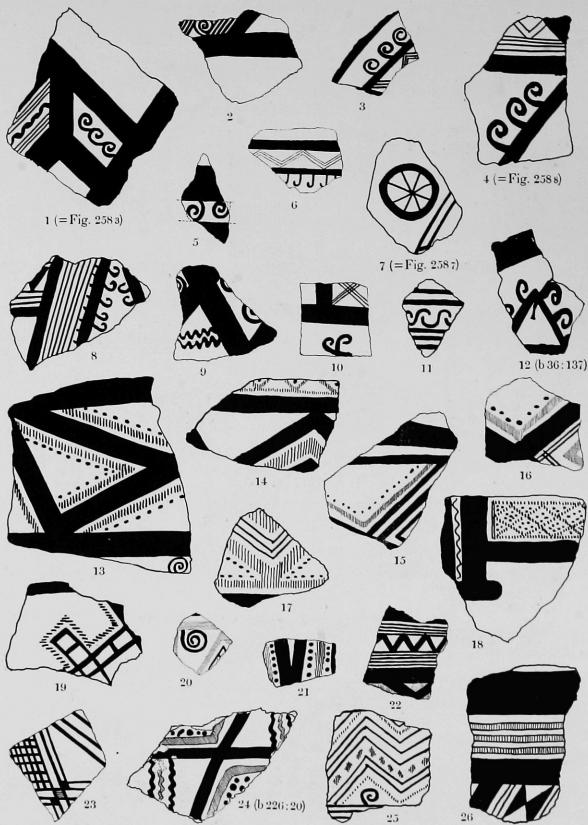


FIG. 264.—PAINTED SHERDS. SCALE, 1:3

- c 226 (Fig. 241 and Pl. IX). Fragment of a large pitcher with beak-spout, .450* h.; pair of "breasts" in relief on one side; probably a handle opposite spout; medium, plant-tempered, well made ware; reddish buff paste with gray core; moderately fired; buff slip on outside; geometric design in dark brown and red; on either side of the beak-spout, a representation of an eye. Found 1.20-1.80 deep in J 24; the fragments were spread over the entire plot.
- c 275 (Fig. 237 and Pl. IX). Bowl .091 h.; coarse, grit- and plant-tempered, fairly well made ware; gray paste; moderately fired; coarse buff slip. Found 1.65 deep in J 25.
- c 276 (Fig. 237 and Pl. IX). Bowl .077 h., .204 d.; coarse, grit- and plant-tempered, well made ware; gray paste; moderately fired; coarse buff slip with red wash. Found 1.60-2.25 deep in J 25.
- c 301 (Fig. 237 and Pl. IX). Bowl with two horizontal triangular handles, .085 h., .247 d.; medium, plant-tempered, well made ware; gray paste; moderately fired; reddish buff slip on outside of vessel, varying in color according to firing; geometric design on rim, from which a decorated band in a faded dark brown descends at each side of each handle. Found 2.25-2.85 deep in J 25.
- c 303 (Fig. 237 and Pl. IX). Bowl .059 h., .189 d.; coarse, grit-tempered, well made ware; gray paste; moderately fired; buff slip with reddish wash. Found 2.25-2.85 deep in J 25.
- c 304 (Fig. 238 and Pl. IX). Cup .077 h., .109 d.; medium, plant-tempered, well made ware; reddish buff paste with gray core; moderately fired; light buff slip over entire vessel; geometric design in dark brown over outside. Found 2.25-2.85 deep in J 25.
- c 305 (Fig. 238 and Pl. IX). Cup .076 h., .066 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; buff slip over outside, carrying down inside of rim; geometric design in dark brown, very much faded. Found 2.25-2.85 deep in J 25.
- c 306 (Fig. 238). Small cup .031 h., .043 d.; medium, plant-tempered, well made ware; reddish buff paste; heavily fired; reddish buff slip on outside; much faded remains of a geometrical design in dark brown. Found 2.25-2.85 deep in J 25.
- c 490 (Fig. 237 and Pl. IX). Bowl .067 h., .188 d.; coarse, grit- and plant-tempered, poorly made ware; gray paste; warped; coarse buff slip with red wash. Found 2.25-2.85 deep in J 25.
- c 491 (Fig. 246 and Pl. IX). Fragment of a vessel with high cup-base; a pair of "breasts" midway of vessel on either side; between these pairs of "breasts" a crescent-shaped ledge handle on each side; medium, plant-tempered, well made ware; buff paste; heavily fired; reddish buff slip, varying in color on account of firing; geometric design in faded dark brown. Found 1.60-2.25 deep in J 25.
- c 800 (Fig. 238 and Pl. IX). Cup .075 h., .105 d.; medium, plant-tempered, fairly well made ware; reddish buff paste; heavily fired; buff slip covers entire vessel; much faded design around rim and upper body, with three panels tapering to pointed bottom. Found 2.10 deep in I 25.
- c 801 (Fig. 237 and Pl. IX). Bowl .101 h., .285 d.; medium, plant-tempered, well made ware; gray paste; moderately fired; yellowish buff slip over entire vessel; geometric design in dark reddish brown around rim. Found 1 meter deep in I 25.
- c 802 (Fig. 237 and Pl. IX). Bowl .075 h., .193 d.; coarse, plant-tempered, fairly well made ware; reddish buff paste; heavily fired; light yellowish buff slip over entire vessel; geometric design in dark reddish brown around rim. Found 1 meter deep in I 25.
- c 840 (Fig. 238). Small cup .038 h., .051 d.; coarse, plant- and grit-tempered, fairly well made ware; buff paste; heavily fired; crude red slip over all; much faded geometric design from rim to pointed bottom on the outside and on inside of rim. Found 2.00-2.50 deep in I 25.
- c 841 (cf. c 206). Cup .064 h., .092 d.; coarse, plant-tempered, fairly well made ware; buff paste; heavily fired; crude red slip over all; traces of much faded geometric design around rim. Found 2.00-2.50 deep in I 25.
- c 1007 (Fig. 239 and Pl. IX). Part of a large cup .162 h., .136 d.; medium, plant-tempered, fairly well made ware; reddish buff paste; moderately fired; reddish buff slip over all; the neck has a white panel with dark brown geometric design. Found 2.90 deep in I 25.
- c 1161 (Fig. 239 and Pl. IX). Double cup .046 h., .067 d., with one handle; an aperture .005 in diameter allowed passage of liquids from one cup to the other; medium, plant-tempered, well made ware; reddish paste; moderately fired; buff slip over all; geometric design in dark brown, different on each cup. Found 2.40-2.90 deep in B 24.
- c 1274 (Fig. 237 and Pl. IX). Bowl with four sets of three vertical ridges placed equidistantly on the rim, .070 h., .167 d.; fine, plant-tempered, very well made ware; buff paste; moderately fired; polished yellowish red slip covers the inside and overlaps on outside of rim in the four segments made by the ridging; yellowish buff slip almost approaching a decayed glaze covers the outside up to the shoulder, as well as the ridges. Mortuary gift with c X16; found 4 meters deep in A 24.

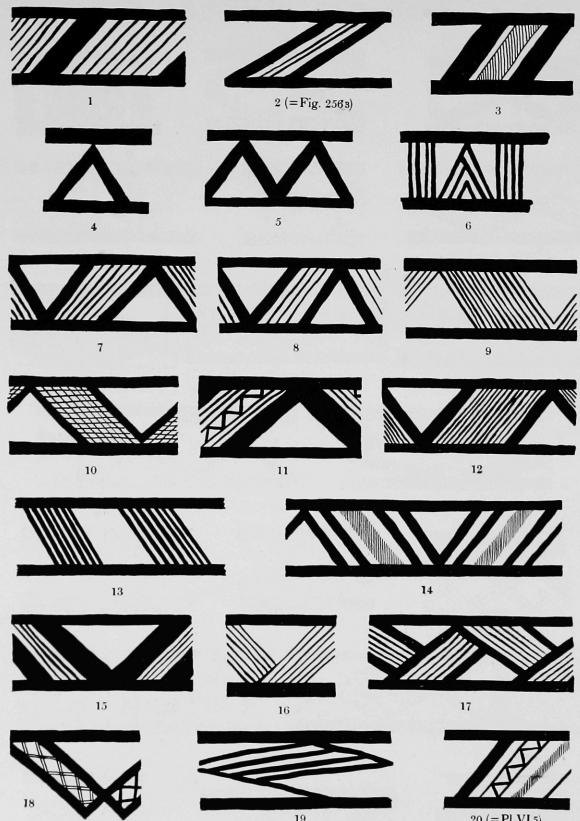


FIG. 265.—DECORATIONS OF BOWL RIMS

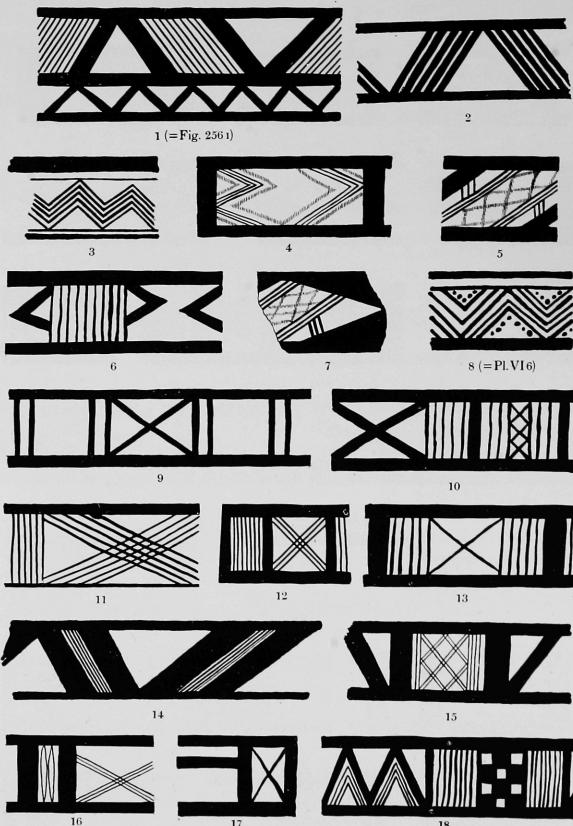


FIG. 266.—DECORATIONS OF BOWL RIMS

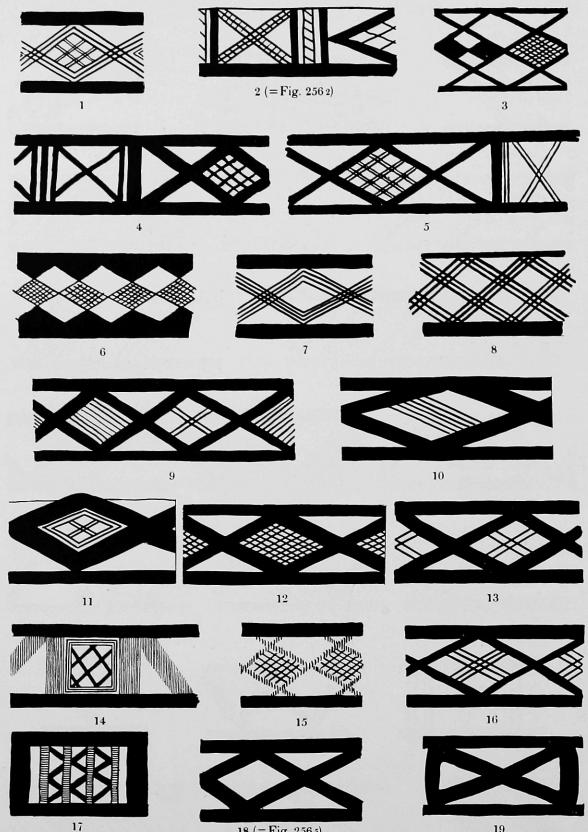


FIG. 267.—DECORATIONS OF BOWL RIMS

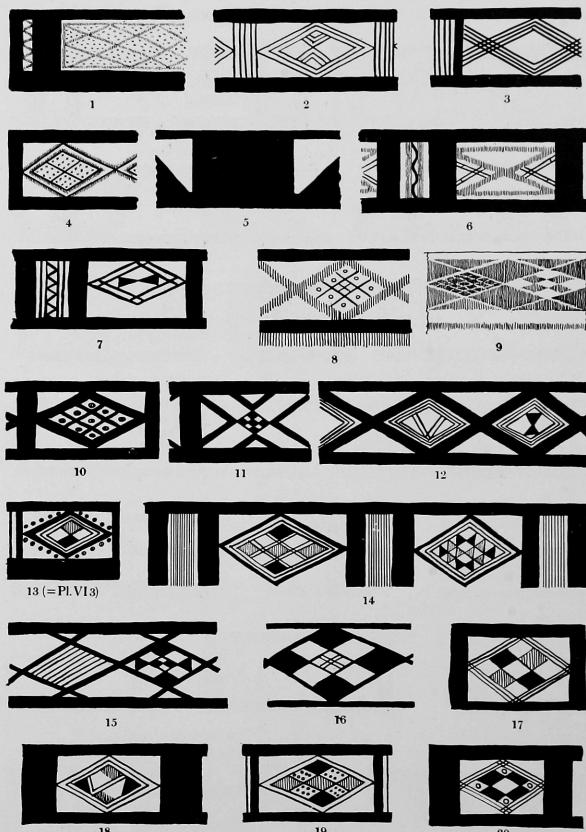


FIG. 268.—DECORATIONS OF BOWL RIMS

- c 1793 (Fig. 238 and Pl. IX). Cup .054 h., .086 d.; fine, grit-tempered, well made ware; reddish buff paste; lightly fired; yellowish buff slip; geometrical design in dark brown and brownish red. Found 6.50 deep in L 12.
- c 1794 (Fig. 238 and Pl. IX). Fragmentary cup .050 h., .083 d.; medium, plant-tempered, well made ware; reddish paste; heavily fired; buff slip over all; dark brown geometrical design. Found 7.60 deep in L 12.
- c 1795 (Fig. 239). Small bowl with two triangular handles, .046 h., .153 d.; medium, grit-tempered, well made ware; buff paste; moderately fired; yellowish buff slip with ornamental band around rim in dark brown and reddish brown. Found 7.60 deep in L 12.
- c 1796 (Fig. 237). Bowl with two crescent-shaped handles lying on rim, .070 h., .175 d.; medium, grit-tempered, well made ware; buff paste; moderately fired; buff slip; ornamental band around rim in dark brown and reddish brown. Found 7.60 deep in L 12.

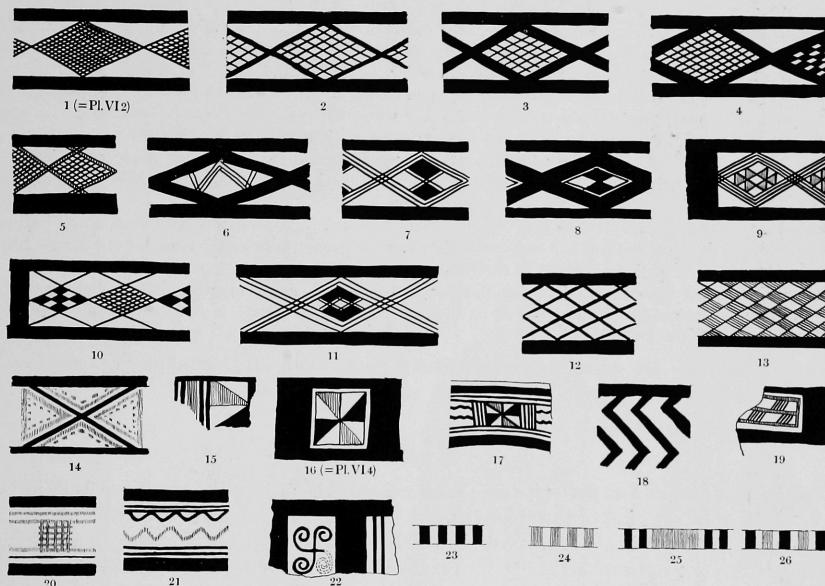


FIG. 269.—DECORATIONS OF BOWL RIMS (1-22) AND LIPS (23-26)

- c 1898 (Fig. 239 and Pl. IX). Large cup .127 h., .148 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; whitish buff slip on outside of vessel and inside of rim; geometric design in dark brown and brownish red. Found 7 meters deep in L 12.
- c 2143 (Fig. 240 and Pl. IX). Fragmentary cup .083 h., .110 d.; fine, grit-tempered, very well made ware; reddish paste; heavily fired; highly polished red slip over all, with dark brown geometrical design. Very similar to ware found at Kültepe. Found 7.60 deep in L 12.
- c 2144 (Fig. 238 and Pl. IX). Cup .063 h., .088 d.; medium, grit-tempered, fairly well made ware; buff paste; moderately fired; red slip over inside, extending on outside to a little below median body; polished. Found 9.80 deep in L 12.
- c 2262 (Fig. 245 and Pl. IX). Large jar with two small vertical band handles on the shoulder, 1.000 h., .700 d.; coarse, plant-tempered, fairly well made ware; buff paste with gray core; moderately fired; wet-smoothed. Burial jar of c X16; found 4 meters deep in A 24.
- d 2112 (Fig. 239 and Pl. IX). Large cup .113 h., .091 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; yellowish buff slip over entire vessel; five much faded bands from just below rim to median body. Found at floor level of second building period of the southern gateway of the citadel.

- d 2114 (Fig. 238 and Pl. IX). Cup .048 h., .092 d.; medium, plant-tempered, very well made ware; buff paste; moderately fired; buff slip over all; geometric design in dark brown and brownish red. Found below floor level of second building period of the southern gateway.
- d 2493 (Fig. 239 and Pl. IX). Large cup .116 h., .140 d.; medium, plant-tempered, very well made ware; buff paste with gray core; moderately fired; buff slip on outside and on inside of rim; dark brown and brownish red geometric design. Found on pavement of first building period of the southern gateway.
- d 2494 (Fig. 242 and Pl. IX). Large jar with four vertical handles, .400* h., .285 d.; coarse, plant-tempered, very well made ware; buff paste; moderately fired; buff slip over outside and on inside of rim; dark brown and brownish red geometric ornamentation. Found on pavement of first building period of the southern gateway (cf. Fig. 213).
- d 2884 (Fig. 238 and Pl. IX). Cup .045 h., .078 d.; fine, plant-tempered, well made ware; buff paste; moderately fired; reddish slip over all. Found 10.70 deep in O 10.
- d 2978 (Fig. 243 and Pl. IX). Large jar with two triangular handles, .340 h., .290 d.; coarse, plant-tempered, well made ware; buff paste; moderately fired; reddish slip covers rim, handles, and body to just above bottom. Found 11 meters deep in O 10.
- d 2993 (Fig. 244 and Pl. IX). Large jar with long neck flaring at the top and two triangular handles, .390* h., .337 d.; coarse, plant-tempered, very well made ware; buff paste; moderately fired; yellowish red slip over all; dark brown and brownish red geometric design. Found 10.50 deep in O 10.
- d 2994 (Fig. 237 and Pl. IX). Bowl .082 h., .200 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; red wash on rim and just below; lower body rough. Found 6.80 deep, below foundation of lowest building period of the Hittite Empires in T 28.
- e 1359 (Fig. 238 and Pl. IX). Small cup .038 h., .058 d.; medium, plant-tempered, well made ware; buff paste; moderately fired; reddish buff slip over exterior, with geometric design in dark brown. Found beneath foundation of northern gateway of the Hittite period in R 0-1.
- e 2325 (Fig. 242). Fragments of a large jar; medium, grit-tempered, well made ware; buff paste with thin gray core; moderately fired; reddish buff slip with geometrical ornamentation in dark brown and reddish brown. Found in L 13.

Pottery figurines are described below. Minor pottery objects, including "whorls," are described on page 270. For analyses of pottery see *OIP XXX* 336f.

FIGURINES

Two human figurines of pottery were found in Early Bronze Age layers, No. e 2113 in Level 5 M in L 12 and No. e 2224 in Level 6 M in M 11. Three others (d 1511, d 1683, and d 1722) were found in the destruction deposit below Level 6 M in O 11. A stone animal figurine (e 2259) was found in Level 5 M in N 12. Since most of these objects are typical of the Copper Age and probably intrusive here, they are described and illustrated with Copper Age remains (pp. 177-80).

SEALS

Four stamp seals (c 740, c 1839, e 394, and e 560) were found in the early layers of the Early Bronze Age or in layers of mixed refuse. Since they are similar to the stamp seals of the Copper Age, they are described with the latter (p. 183).

STONE OBJECTS

The stone objects (Figs. 270-71) are generally similar to those found in the Chalcolithic and Copper Age layers. The chalcedony, obsidian, and flint objects include flakes, small blades, scrapers, and rough points; No. d 180 is an especially fine point of bluish chalcedony. A great many fragmentary maceheads of diorite and serpentine were found (e.g., d 1039 and d 1828). They show the same forms as those of the previous two periods. One large macehead, the perforation of which is incomplete, is of porphyry (d 1561).

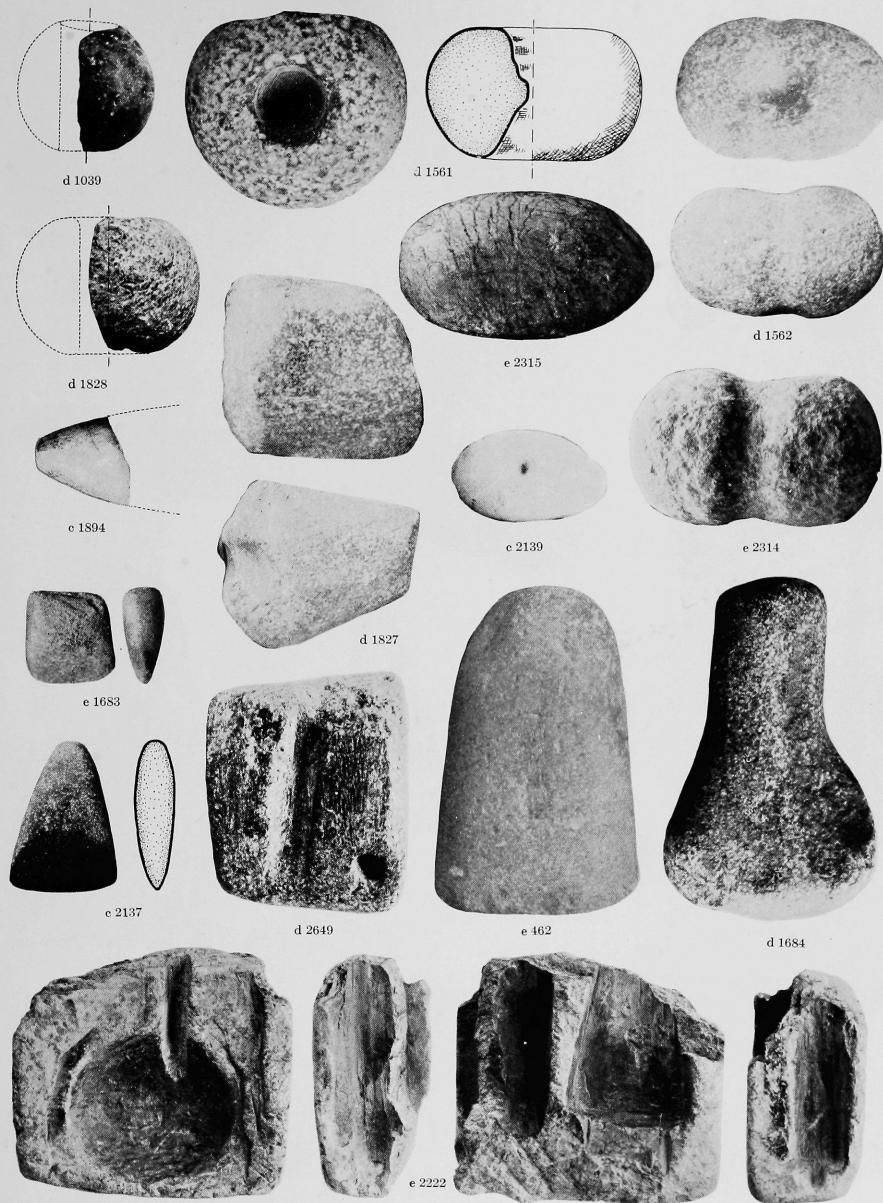


FIG. 270.—STONE OBJECTS. SCALE, 1:2

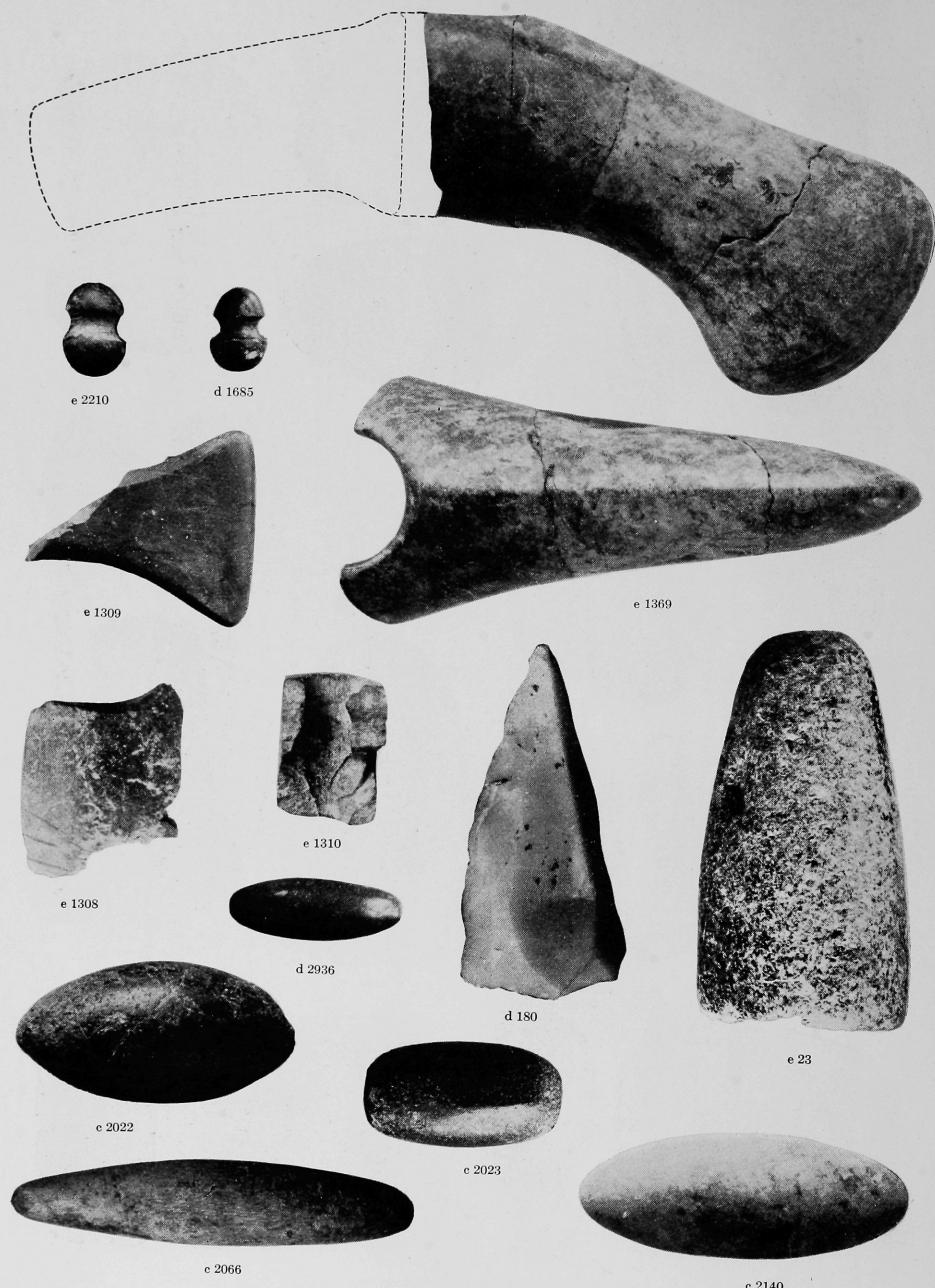


FIG. 271.—STONE OBJECTS. ACTUAL SIZE



FIG. 272.—BONE OBJECTS AND A METAL POINT. ACTUAL SIZE

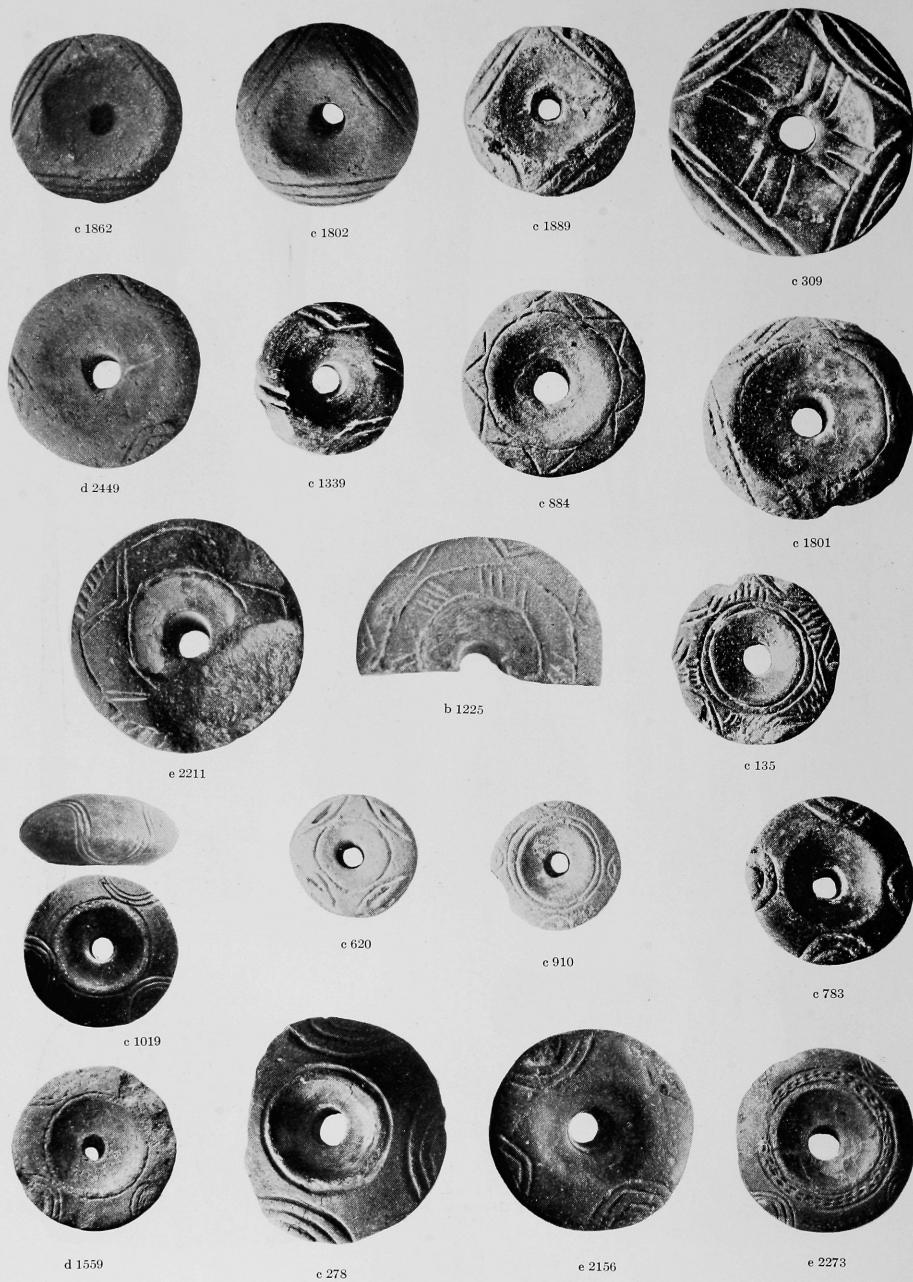


FIG. 273.—POTTERY "WHORLS." ACTUAL SIZE

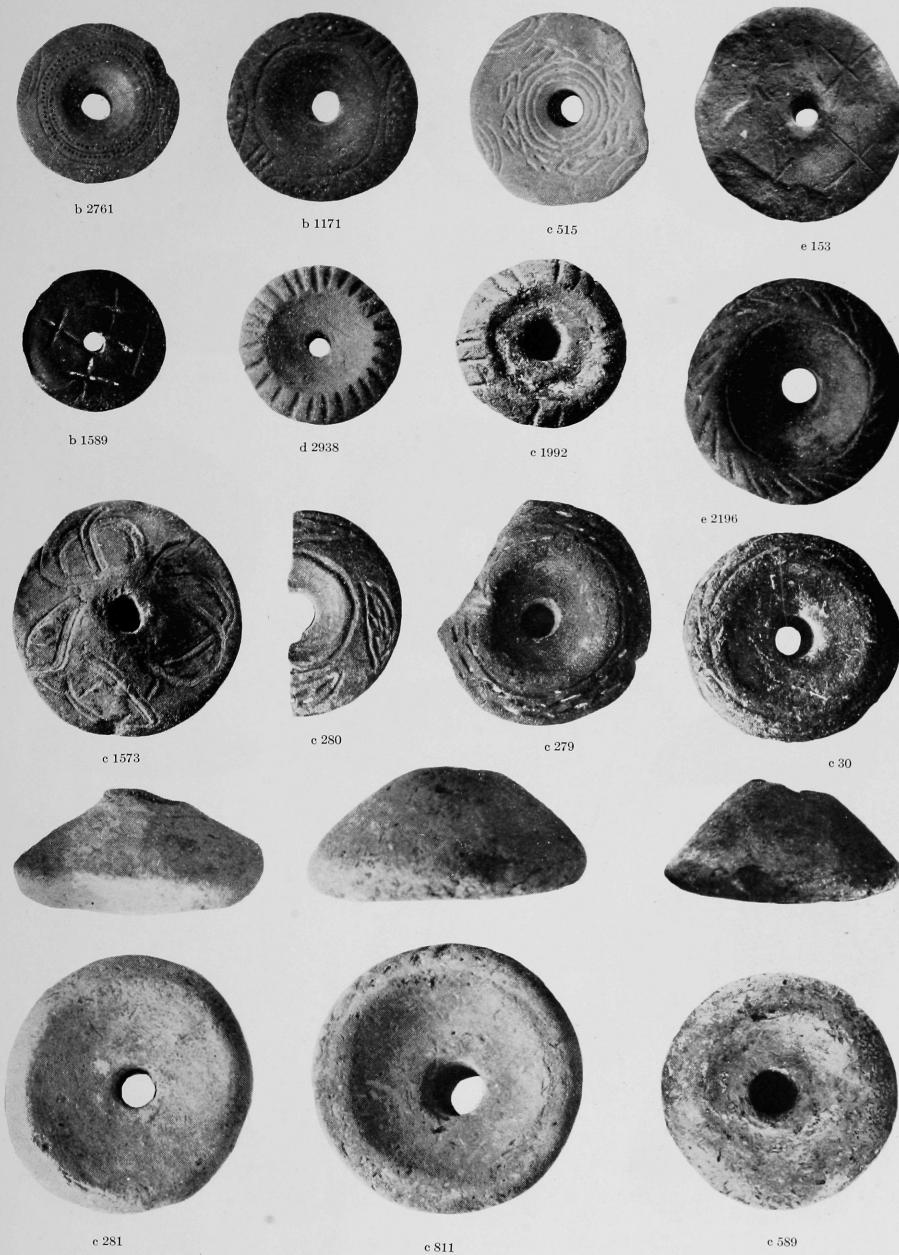


FIG. 274.—POTTERY “WHORLS.” ACTUAL SIZE

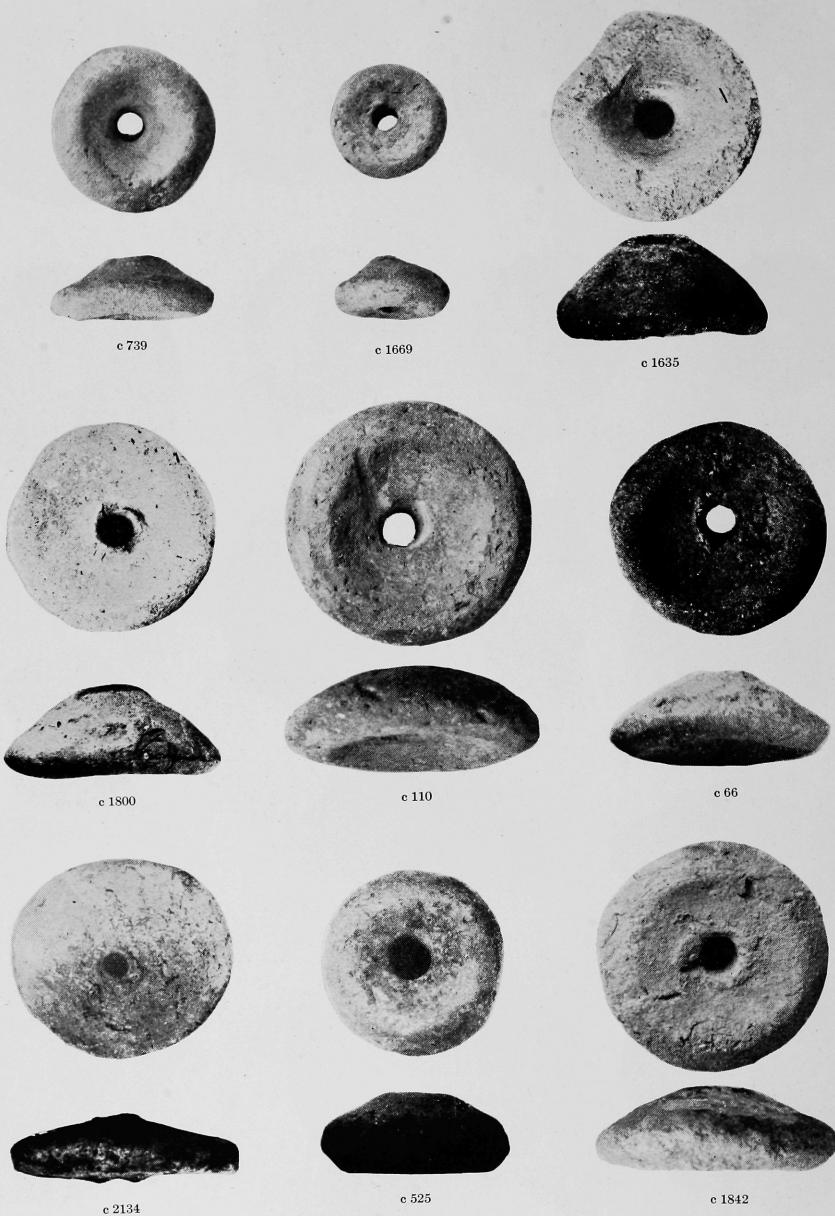


FIG. 275.—POTTERY "WHORLS." ACTUAL SIZE

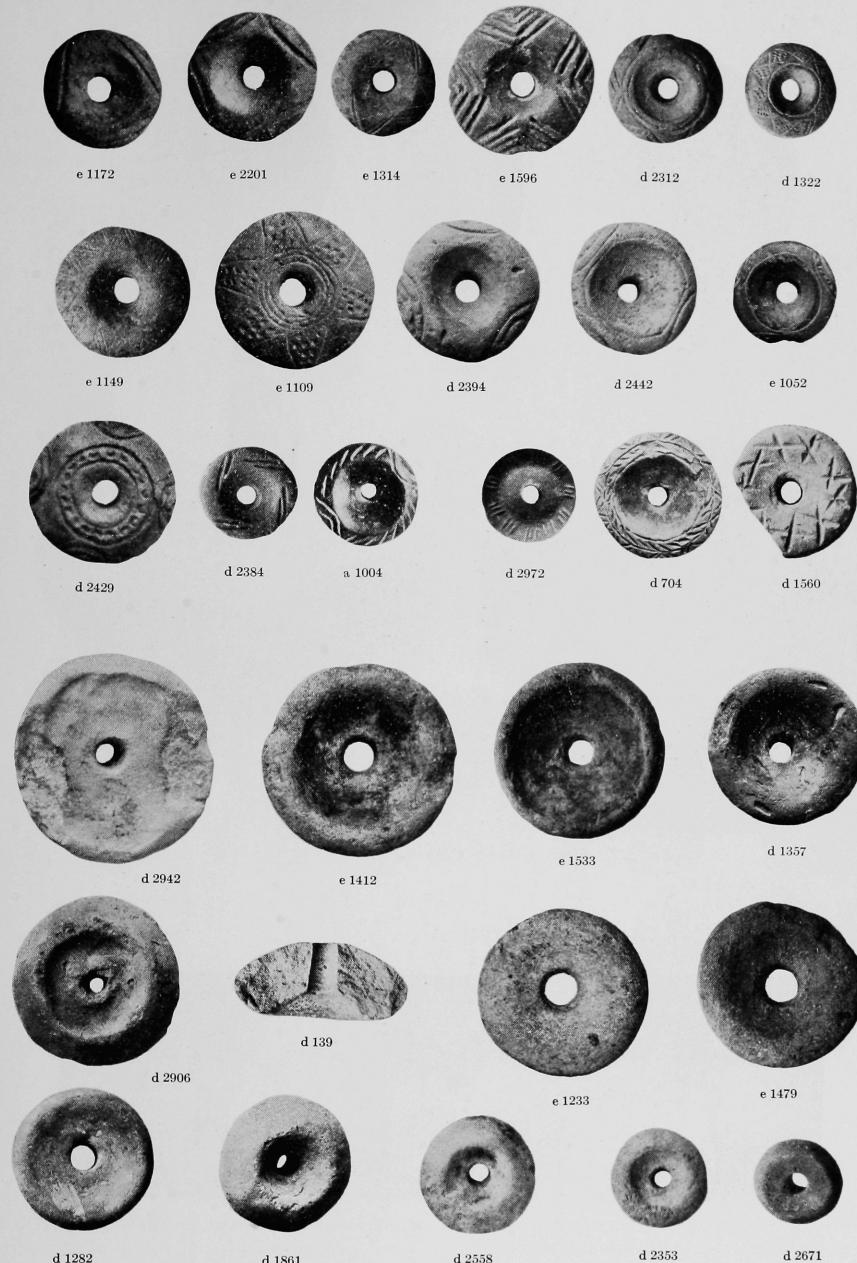


FIG. 276.—POTTERY "WHORLS." SCALE, 2:3

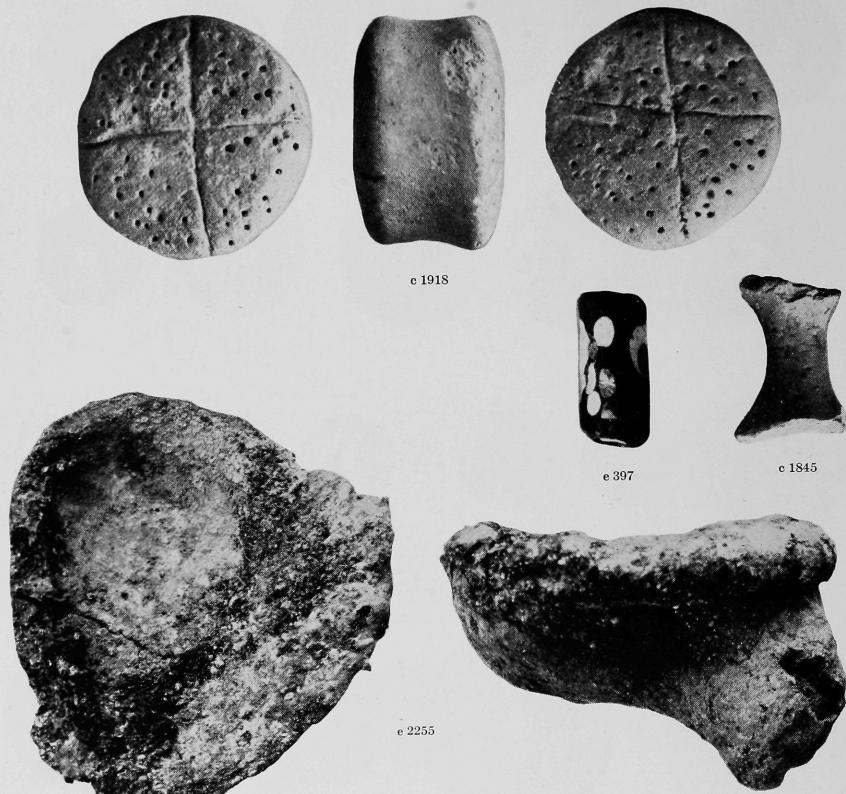


FIG. 277.—MISCELLANEOUS POTTERY OBJECTS. ACTUAL SIZE



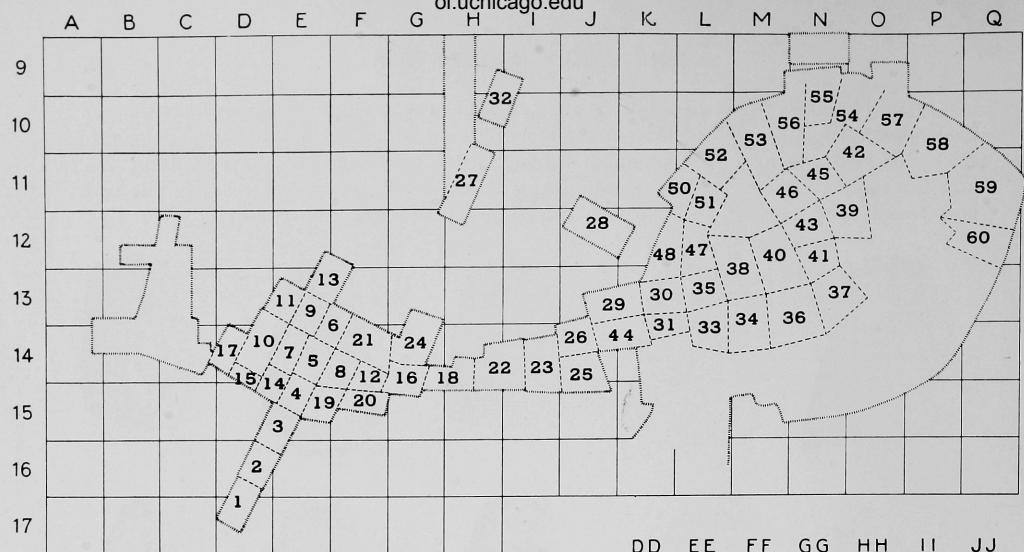
FIG. 278.—FRAGMENTS OF POTTERY ANDIRONS OR SPIT-SUPPORTS. SCALE, ABOUT 1:8

A type of hammer with two blunt ends (e.g., e 2314) has an all-around groove like those of the Copper Age. No. d 1562 is such a hammer with the beginnings of a perforation on opposite sides. No. e 2315 seems to be a hammer, although it has neither groove nor perforation. No. c 2139 is a similar hammer with the beginning of a perforation. Several objects like this have been found; they may be handles of bow drills instead, although that seems less likely.



FIG. 279.—POTTERY LOOM WEIGHTS. SCALE, 2:5

Several fragmentary hammer axes (e.g., c 1894 and d 1827) of the same types as those of the Chalcolithic and Copper Ages appeared. Small flat axes of serpentine or diorite (e.g., e 1683 and c 2137) show slightly more developed forms than those of the Copper Age. A very carefully worked and polished ax (e 1369), found in a refuse layer in S 0 where sherds of the Copper Age and Early Bronze Age were mixed, was most probably a ceremonial ax. From



DD EE FF GG HH II JJ



FIG. 280.—CORRELATION OF THE PLOTS OF 1927 WITH THE LATER NET

the same plot and layer came three fragments of smaller axes made of a dark greenish limestone (e 1308–10). Stones such as Nos. c 2022–23, c 2066, and c 2140 may have been projectiles for slings. Ovoid hematite objects such as No. d 2936 were probably amulets, for the same form is used in that way today. Or both of these last groups may possibly have been weights. Stone toggles (e.g., e 2210 and d 1685), the hematite amulets(?), and drill handles (e.g., e 23), of types known from the Copper Age, as well as polishing pebbles, were frequent. Nos. d 1684 and e 462 are pestles. Serpentine "whorls" of the Copper Age type were numerous.

Far more interesting were two serpentine molds found in the uppermost Early Bronze Age layer on the citadel mound where objects of the next cultural period appear admixed. Of

APPROXIMATE DATE*	OIP XXVIII-XXX AND OIC No. 14			OIC No. 11 AND OIP XIX-XX	OIP VI-VII		
	Periods	Levels†					
		Mound	Terrace				
11th to 18th century	Turkish (Osmanli Seljuk)	1		VII (Osmanli Seljuk)	Osmanli and Seljuk		
0 to 11th century	Byzantine and Roman		2-3	VI (Byzantine Roman)	Byzantine and Roman		
7th century B.C. to 0	Hellenistic (including independent kingdom of Cappadocia and the Galatian invasion) and Medo-Persian	2-3	4-7	V (Hellenistic Medo-Persian Phrygian)	Late III		
12th to 7th century B.C.	Phrygian Post-Hittite	$\left\{ \begin{array}{l} 4a \\ 4b \\ 4c \end{array} \right\}$	8-9	IV: Hittite Empire	Middle III		
End of 3d millennium to 12th century B.C.	Hittite Empires (including Mesopotamian merchants)		10-11	II: aliens	II		
Extends into 2d millennium B.C.	Early Bronze Age (overlapping beginning of first Hittite Empire)	$\left\{ \begin{array}{l} 5 \\ 5-6 \end{array} \right\}$	$\left\{ \begin{array}{l} 12 \end{array} \right\}$	III: Early Hittites	Early III		
Ends in 24th century B.C.	Copper Age	$\left\{ \begin{array}{l} 7-9 \\ 10-11 \end{array} \right\}$	13-14	I: Early Anatolians	I		
	Chalcolithic§	12-19					

* For details cf. OIP XXX.

† The mound levels agree in all reports. On the terrace Dr. Schmidt started his numberings with "Level 1" in each individual area.

§ Called "Neolithic" in OIC No. 14.

FIG. 281.—TABLE CORRELATING DESIGNATIONS OF LEVELS AND CULTURE PERIODS IN THIS REPORT WITH THOSE USED IN PREVIOUS REPORTS OF WORK AT THE ALIŞAR MOUND

course it is quite possible that they belonged to the Hittite period, with which we know that the end of the Early Bronze Age on the citadel mound was contemporaneous. No. e 2222 has molds on four surfaces. On one wide surface are molds for two flat axes, on the other a mold for a convex circular object. The two sides have molds for chisel-shaped objects. No. d 2649 is too worn to show what object could be molded in it.

Stone figurines and seals are described on page 258.

BONE OBJECTS (FIG. 272)

In the lower building level of the Early Bronze Age on the citadel mound, bone awls typical of the Copper Age are predominant. In the upper level awls typical of the Hittite period begin to appear; they are made of the metatarsals of horses or asses. Other types of awls (e.g., e 1673) and bone splinters, roughly pointed to make awls of all sizes without any particular

preference as to shapes or bones used, are frequent. No. e 2195 may be a weaving tool. No. e 2200 may be either an awl or a needle; the use of points d 705 and d 2908 is problematical. Spatulate objects (e.g., c 1947 and c 2179) resembling those of the Copper Age are frequent. Nos. e 2207 and e 2220 are flat bone objects of a different form. No. c 2141 is an ivory implement suitable in form but scarcely strong enough for drawing a bowstring.

Relatively great was the number of fragmentary objects of staghorn. Nos. c 495 and d 823 seem to have been fastenings. No. e 2307 was probably a large cotter pin.

For shells see *OIP* XXX 324.

METAL OBJECTS

BRONZE OR COPPER

The pins show all the varieties of the Copper Age. The few very fragmentary points and blades were of no particular interest. One large fusiform point, No. e 2261 (Fig. 272), was found in the later Early Bronze Age level on the citadel mound, but it might very well be a stray piece from the Hittite period, as may blade b 3.¹⁵

Metal seals are enumerated on page 258.

LEAD

A few pieces of lead wire bent roughly into rings, a form common in the following period, were found in the upper level of the Early Bronze Age on the citadel mound.

MINOR OBJECTS OF POTTERY OR CLAY

Three types of pottery objects of this period deserve special mention. A surprisingly great number of "whorls" (Figs. 273-76) was found, some carefully ornamented. The ornamentation undoubtedly shows a relation to that of the pottery "whorls" of the Copper Age, but the form is distinctly different. The Early Bronze Age "whorls" show concavities in the centers, sometimes on both sides but more frequently on only one side. This form of "whorl" persisted far into the Hittite period. Typical Copper Age pottery "whorls" continued to appear, as did the serpentine "whorls" of that period.

Two ladles for the casting of metal, Nos. e 2255 (Fig. 277) and c 1840, were found in refuse on the citadel mound.

Pottery andirons or spit-supports, which appeared sporadically in the Copper Age, now become frequent and are sometimes relatively large (Fig. 278). They were especially frequent in Level 6 M.

Spool-shaped objects (c 1845 and c 1918, Fig. 277) like those which became frequent in the Hittite period appear. No. e 397 (Fig. 277) is a pottery bead with white inlay. Loom weights, of which several hoards have been found (e.g., hoard c 2075, Fig. 279), are of the previously known roughly pyramidal type.

FRIT OBJECTS

A few small discoid beads perforated in the center were the only frit objects found.

¹⁵ *OIP* XIX, Fig. 270.

INDEX OF PLOTS

The plots of 1927 are correlated with those of 1928-32 in Figure 280 on page 266.

A-C 24	185, 220, 223, 254, 257	M-O 14-15	8, 208, 214	Z 15	110, 129	
A-E 8	10, 20, 135, 189	N 12	180, 258	Z 26-29	10, 118, 129, 150, 183	
E 7	189	O 9-11	8, 15, 112, 116, 180, 208, 210,	Z 29-CC 25	110, 112, 118	
F 14	111, 118, 214	214, 250, 258	P 31	185	Z-AA 12-13	110, 129, 137
H 10	20	P-U 26	14	AA 15-16	132, 137, 140	
H-J 8	10, 20	P-U 27-31	7, 17, 183	AA 27	118	
I 33	189	Q 32-33	8, 110, 118	AA-BB 13-15	129, 137	
I-J 22-26	111-12, 209, 220, 254	Q-R 29	8	BB 24-26	180	
I-J 28	125, 140, 180	R 6	31, 132	CC 13	28, 31, 129, 137	
J 22-27	110-11, 129, 135, 140, 183,	R 26	185	CC-DD 25	118, 185	
185, 209, 220, 254		R-T 0-2	10, 21, 135, 223, 258, 267-	DD-EE 10	132, 140	
J 29-31	180, 185, 189, 254	69		DD-EE 19	132, 135, 223	
J-K 13-14	214	S 20-24	132, 180, 183, 223	DD-FF 13	183	
J-M 33-36	7-8, 129, 183	S-T 28	185, 223, 258	EE 25	10	
K 34	185	S-U 29-31	24, 112, 125, 145, 147,	EE-II 17	10	
K-L 14	208	180, 183, 185, 189	T-U 13	209, 220	FF 3-4	180, 185
L 11-13	180, 185, 208, 210-14, 250,	U 24	180	FF-GG 2-3	135	
257-58		U 27-28	150, 180	GG-II 9	111, 220	
L 14-16	6-7, 27-110, 112-17, 180,	W 1-3	20, 135, 180	HH 13	185	
185, 193, 214		W 24	112, 129, 142, 145, 180, 183,	HH-II 8	223	
L 18	183	250		II 14	135	
L 34	180	W-Y 1-2	10	II 17	110, 112, 118	
L-M 11-12	180, 214, 258	W-Y 14-15	110	II-JJ 11-13	135	
L-M 29	110, 125, 140, 142, 180,	X 19	135	JJ 5-6	135	
183, 185, 193, 223, 250		Y 7	132	TT-XX 24	10, 185, 189	
L-M 35-36	135			YY 22	189	
M 33-34	17, 22, 183, 189					
M-N 33	17					

INDEX OF FIELD NUMBERS

Plate numbers are given for vessels not discussed in the text.

SEASON OF 1927

342	253	1907	Pl. VIII	3208	136-37
353	Pl. IX	3200	137	3209	135, 137
362	253	3202	137	3211a	136-37
389	253	3203-4	136-37	3212-13	137
769	Pl. IX	3206	135, 137	3224	136-37
809	253	3206a	135, 137	3279	164
1876	28, 31, 100	3207	137		

SEASON OF 1928

a 1004	265	a 1066	156, 170	a 1072	Pl. IX
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SEASON OF 1929

b 3	270	b 332	158, 164	b 1580	180
b 17	Pl. IX	b 341	Pl. VIII	b 1589	263
b 36:126	252	b 378	Pl. VIII	b 2278	185
b 36:132	253	b 379a	158	b 2534	Pl. VIII
b 36:137	253	b 379b	Pl. VIII	b 2537	Pl. IX
b 36:140	252	b 387	202	b 2547	Pl. VIII
b 36:153	252	b 419a-b	241	b 2680	140
b 36:301a	251	b 455	164, 170	b 2683	164, 171
b 36:301f	252	b 489	Pl. IX	b 2728	185
b 36:303	244	b 515	Pl. IX	b 2730	Pl. VIII
b 36:313c	252	b 584	Pl. VIII	b 2732	Pl. VIII
b 36:322	253	b 594	Pl. VIII	b 2733	164
b 36:344	244	b 616	Pl. VIII	b 2761	263
b 37	158, 164	b 653	Pl. VIII	b 2810	Pl. VIII
b 38	164	b 745:15	31, 100	b 3262	135
b 40	202	b 805	180	b X6	136-37
b 100	Pl. VIII	b 859	202	b X7-8	137
b 101	164	b 884	164	b X9	136-37
b 103	177	b 934	202	b X10-13	140
b 125	164	b 1014	202	b X14	136, 140
b 130	164, 171	b 1015	207	b X15-16	223
b 135	158, 164	b 1171	263	b X17	230
b 139	158, 164	b 1180:84	252	b X46	132, 140
b 181	Pl. IX	b 1225	262	b X68	132, 223, 230
b 226:20	253	b 1304	Pl. VIII	b X69	136, 140
b 331	156, 170				

SEASON OF 1930

c 6	183	c 135	262	c 212	198
c 7	187	c 149	207	c 222	176
c 8	193	c 158	185	c 223	185
c 16	199	c 167	199	c 226	247, 250, 254
c 28	189	c 181	182	c 230	180
c 30	263	c 188	200	c 241-42	100
c 40	201	c 190	193	c 243	93, 100
c 66	264	c 206	247, 250	c 244	100
c 73	200	c 207	206	c 245-46	87, 100
c 92	201	c 208	201	c 247-48	100
c 110	264	c 209	202	c 257	185
c 134	202	c 210	182	c 261-62	87, 100

INDEX OF FIELD NUMBERS

c 263-64	100	c 576	81-82, 93, 101	c 1227	199
c 265	82, 100	c 577	61, 78, 101	c 1257	206
c 266-67	100	c 578-80	101	c 1269	180
c 268	93, 100	c 581	93, 101	c 1274	230, 241, 254
c 269-71	100	c 582-83	101	c 1275	230
c 275-76	254	c 584	87, 101	c 1292	187
c 278	262	c 589	263	c 1328	197
c 279-81	263	c 598	78, 81, 101	c 1331	187
c 282-83	176	c 599	101	c 1339	262
c 285	195	c 603	189	c 1371	199
c 287	101	c 620	262	c 1413	125, 176
c 288	81, 101	c 635	180	c 1459	187
c 289	91, 93, 101	c 637	185	c 1480	102
c 290	81, 101	c 641	183	c 1481	81-82, 93, 102
c 291-94	101	c 642	182	c 1482	91, 93, 102
c 298	199	c 643	200	c 1483	87, 102
c 301	254	c 644	206	c 1484	91, 102
c 303-6	254	c 704	200	c 1492	195
c 307	183	c 739	264	c 1506	183
c 308	200	c 740	183, 258	c 1509	57, 71, 77, 102
c 309	262	c 753	198	c 1510	93, 102
c 310	200	c 754	176	c 1511	102
c 311	199	c 761	189	c 1512-14	87, 102
c 315	195	c 782	199	c 1515-17	102
c 326	195	c 783	262	c 1518	100, 102
c 334	198	c 791	189	c 1531	206
c 335	202	c 796	187	c 1544	200
c 346	87, 101	c 800-802	254	c 1545	185
c 366	247, 250	c 811	263	c 1573	263
c 379	201	c 816	206	c 1585	93, 102
c 392	101	c 840	247, 254	c 1586	102
c 393	82, 101	c 841	254	c 1587	93, 102
c 394	100-101	c 844	201	c 1588	87, 102
c 395-96	101	c 872	201	c 1589-91	102
c 419	91, 101	c 884	262	c 1592-95	87, 102
c 420	87, 101	c 907	199	c 1596	102
c 421	93, 101	c 908	200	c 1602	185
c 422-23	87, 101	c 909	201	c 1611-12	93, 102
c 478	176	c 910	262	c 1613-16	102
c 480	100, 101	c 913	185	c 1635	264
c 481	81-82, 101	c 914-15	176	c 1643	197
c 482-83	78, 81, 100-101	c 956	200	c 1660-61	102
c 484-85	101	c 983	193	c 1662	82, 102
c 490	254	c 1002	189	c 1663	102
c 491	247, 254	c 1003-4	185	c 1664	87, 102
c 495	270	c 1007	247, 254	c 1665	82, 102
c 496	202	c 1019	262	c 1669	264
c 506	78, 81, 101	c 1020	202	c 1689	77, 101
c 507-10	93, 101	c 1076	182	c 1706	102
c 511	100-101	c 1119	185	c 1707-8	93, 102
c 515	263	c 1128	195	c 1709	87, 100, 102
c 519-21	101	c 1139	182	c 1710	87, 102
c 522	93, 101	c 1155	182	c 1711-12	102
c 523	93, 101	c 1161	247, 254	c 1713	185
c 525	265	c 1164	200	c 1722	201
c 551	78, 81, 101	c 1183	200	c 1734	51, 76, 102
c 552	93, 101	c 1184	185	c 1735	xxi, 51, 61, 76, 102
c 553	101	c 1192	206	c 1736-37	102
c 554	93, 101	c 1193	198, 206	c 1738-39	87, 103
c 555	91, 101	c 1194	200	c 1793-94	257
c 556-58	101	c 1220	201	c 1795	247, 257
c 561	197	c 1225	183	c 1796	257

c 1800	264	c 2139	267	c 2400	100, 104
c 1801-2	262	c 2140	269	c 2422	199
c 1815	199	c 2141	270	c 2423	200
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PLATES I-X

PLATE I

1. Fragment of a "fruit stand" pedestal; medium, grit-tempered ware; moderately fired; grayish black paste; wet-smoothed; incised decoration on outside; typical Chalcolithic.
2. Rim piece; medium, grit-tempered ware; grayish paste; burnished brown slip over all.
3. Fragment of a "fruit stand" pedestal; medium, grit-tempered ware; grayish buff paste; burnished grayish buff slip on outside; typical Chalcolithic.
4. Medium, grit-tempered ware; reddish buff paste; slip on outside shows smoke stains (brown and black); incised decoration on outside.
5. Rim piece; medium, grit-tempered ware; grayish black paste; burnished black slip on inside; slip on outside, also burnished, is mottled black (at top), grayish buff, and red due to the firing.
6. Rim piece; medium, grit-tempered ware; grayish black paste; burnished black slip with traces of painted decoration on inside; burnished slip on outside is mottled due to firing.
7. Medium, grit-tempered ware; grayish paste; burnished black slip on outside; roughly smoothed slip on inside is yellowish red; typical Chalcolithic.



POTSHERDS OF THE CHALCOLITHIC AGE. ACTUAL SIZE

PLATE II

1. Rim piece; medium, grit-tempered ware; grayish buff paste; brick red slip on inside and outside; incised decoration on outside.
2. Shoulder fragment; fine, grit-tempered ware; reddish buff paste; creamy white slip on outside with brownish red ornamentation.
3. Medium, grit-tempered ware; reddish paste; buff slip on outside with brownish red ornamentation.
4. Rim piece; fine, grit-tempered ware; reddish buff paste with grayish core; highly polished dark red slip on inside and outside.
5. Medium, grit-tempered ware; grayish buff paste; grayish buff slip on outside with remains of painted decoration, much discolored by heat and age.



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POTsherds OF THE CHALCOLITHIC AGE. ACTUAL SIZE

PLATE III

1. Rim piece of a small jar or pitcher; medium, plant-tempered ware; reddish buff paste with grayish core; highly burnished rich red slip—typical of the Copper Age—on outside.
2. Rim piece of a cup or small jar; medium, plant-tempered ware; buff paste; burnished rich red slip on outside, extending into interior; outside decorated by diagonal fluting.
3. Rim piece of a typical Copper Age bowl; medium, plant-tempered ware; buff paste with grayish black core; rich red slip over all; decorative burnishing on inside.
4. Rim piece of a cup or jar; fine, plant-tempered ware; brownish gray paste; burnished yellowish brown slip on outside with dark brown ornamentation.
5. Rim piece; fine, grit-tempered ware; buff paste; buff slip over all with brownish red ornamentation on outside and rim.



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POTSHERDS OF THE COPPER AGE. ACTUAL SIZE

PLATE IV

1. Rim piece of a small cup; fine, grit-tempered ware; reddish buff paste; creamy white slip on outside with reddish brown ornamentation.
2. Rim piece of a cup; fine, grit-tempered ware; brownish gray paste; brown slip on outside with brick red ornamentation.
3. Rim piece of a cup; medium, grit-tempered ware; buff paste; dark red slip on outside with cream-colored ornamentation.
4. Medium, grit-tempered ware; buff paste; yellowish buff slip on outside with purplish brown ornamentation.
5. Rim piece of a cup or small jar; fine, grit-tempered ware; buff paste; buff slip on outside with highly polished brownish red ornamentation.
6. Rim piece; fine grit-tempered ware; buff paste; typical rich red slip on outside with cream-colored ornamentation.
7. Rim piece of a two-handled cup typical of Troy II; fine, grit-tempered ware; buff paste; buff slip over all with brownish red decoration on outside and rim.
8. Fine, grit-tempered ware; reddish buff paste; reddish buff slip on outside with purplish brown decoration; typical intermediate.
9. Shoulder fragment; medium, grit-tempered ware; yellowish buff paste; pinkish buff slip on outside with dark red ornamentation.



POTSHERDS OF THE COPPER AGE (NOS. 1-7) AND OF THE FOLLOWING INTERMEDIATE STAGE (NOS. 8-9). ACTUAL SIZE

PLATE V

1. Fragment of a jar; medium, grit-tempered ware; buff paste; reddish, smoke-stained slip on outside with brownish black ornamentation.
2. Rim piece of a bowl; medium, grit-tempered ware; buff paste with grayish core; reddish buff slip over all with brownish black decoration, much faded.
3. Medium, grit-tempered ware; buff paste; pinkish buff slip on outside with brownish black ornamentation.
4. Fragment of a cup; fine, grit-tempered ware; buff paste; burnished red slip on outside with a cream-colored panel and reddish brown ornamentation.
5. Fragment of a cup; fine, grit-tempered ware; reddish buff paste; burnished red slip on outside with brownish black ornamentation.



1



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5

POTSHERDS OF THE EARLY BRONZE AGE. ACTUAL SIZE

PLATE VI

All are rim pieces of bowls of medium, grit-tempered ware and buff paste (No. 2 reddish buff).

1. Yellowish buff slip over all with brownish black and reddish brown decoration.
2. Reddish slip over all with a cream-colored panel on outside of rim with blackish brown ornamentation.
3. Buff slip over all (the outside a little reddish due to the fring) with brownish black and brownish red ornamentation.
4. Buff slip over all with brownish black and dark red ornamentation.
5. Burnished reddish slip over all with cream-colored panel on outside of rim with blackish brown and red ornamentation.
6. Yellowish buff slip over all with blackish brown ornamentation.



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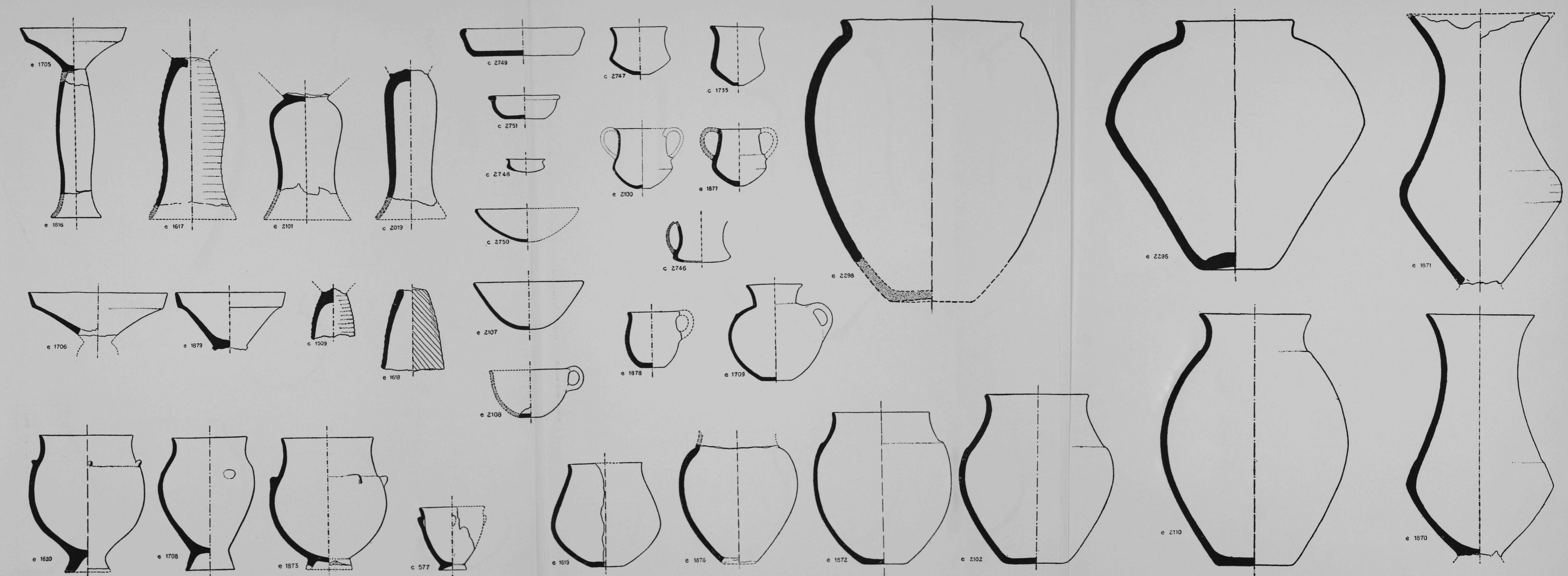


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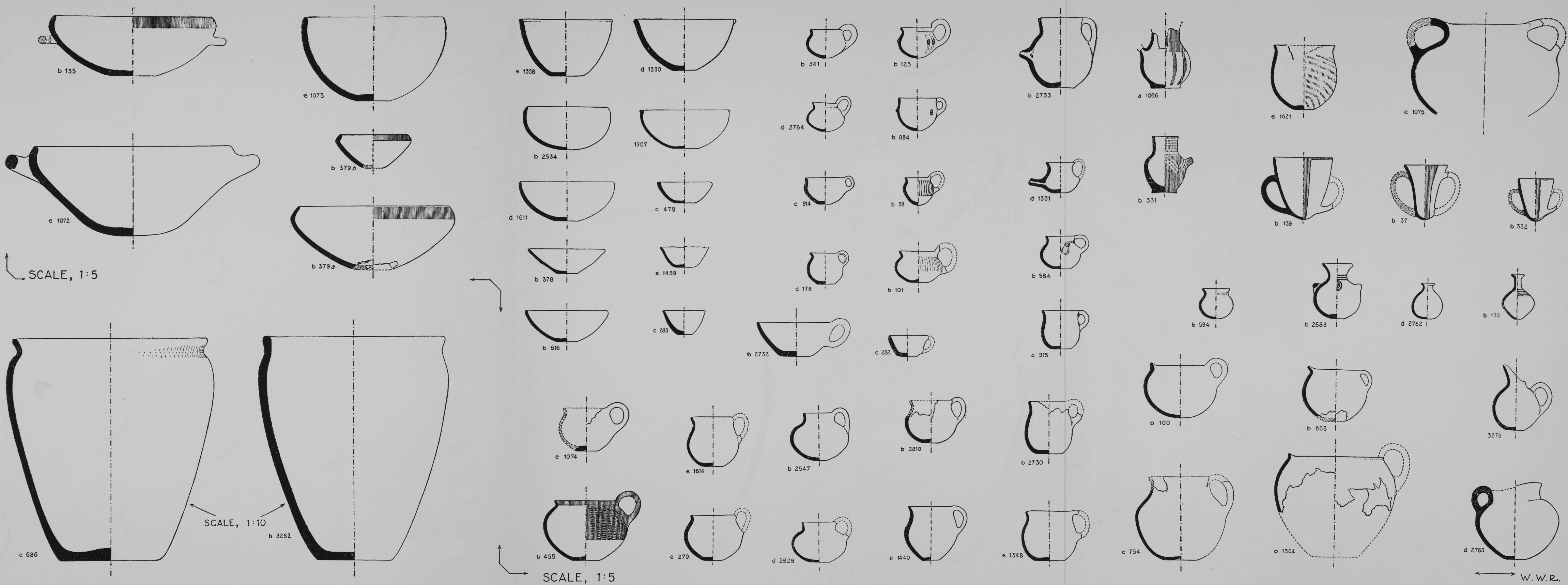
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POTSHERDS OF THE EARLY BRONZE AGE. ACTUAL SIZE

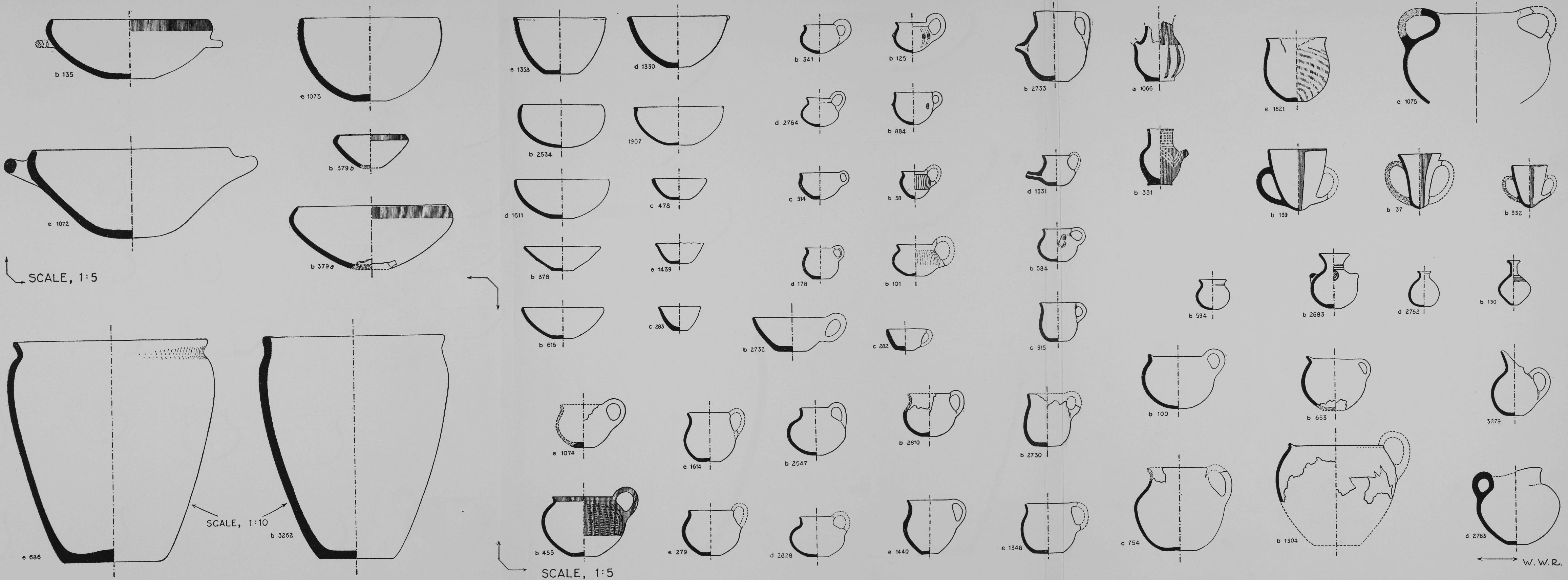


SCALE, 1:5

FORMS OF CHALCOLITHIC VESSELS. SCALE, 1:5

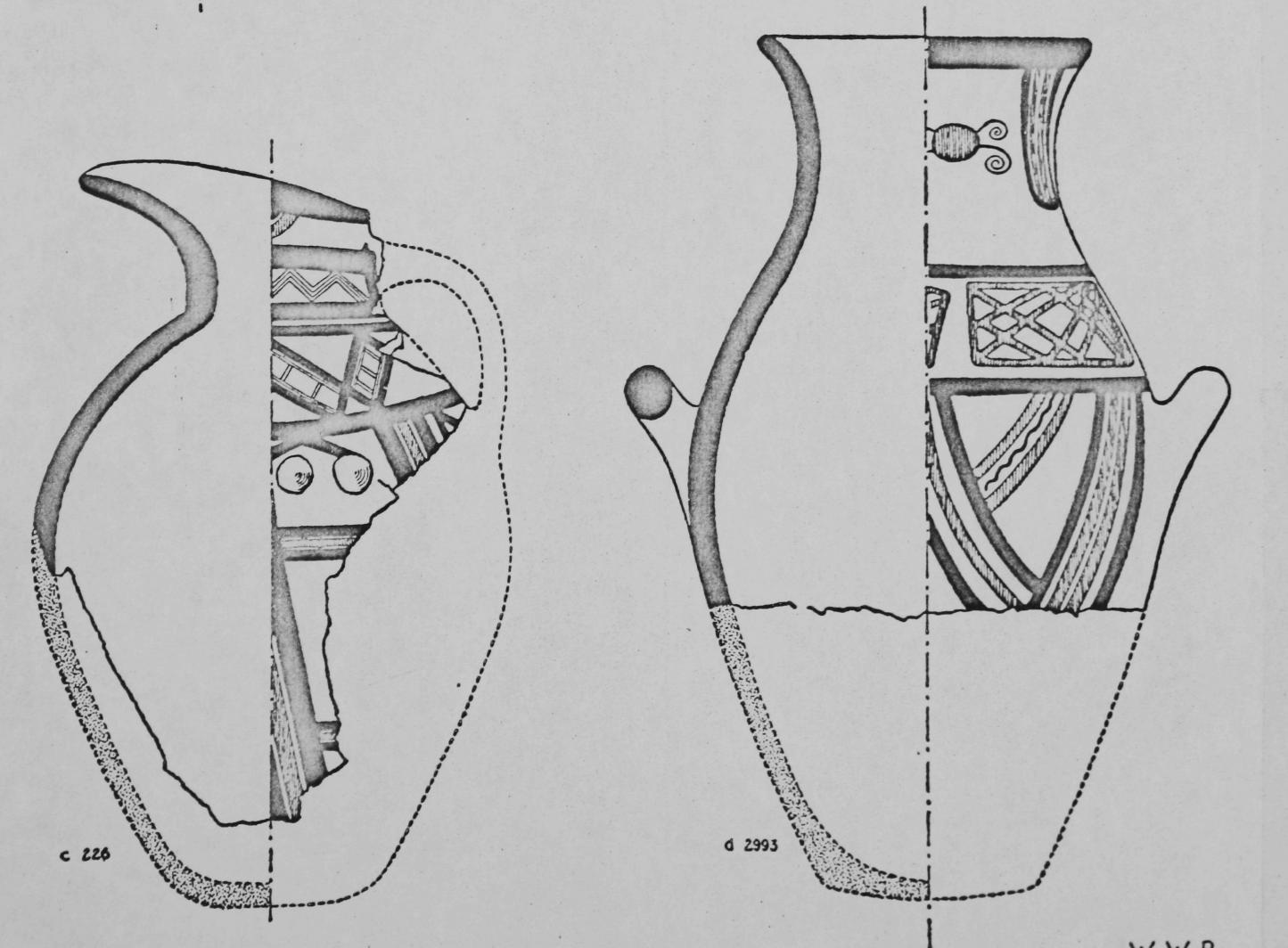
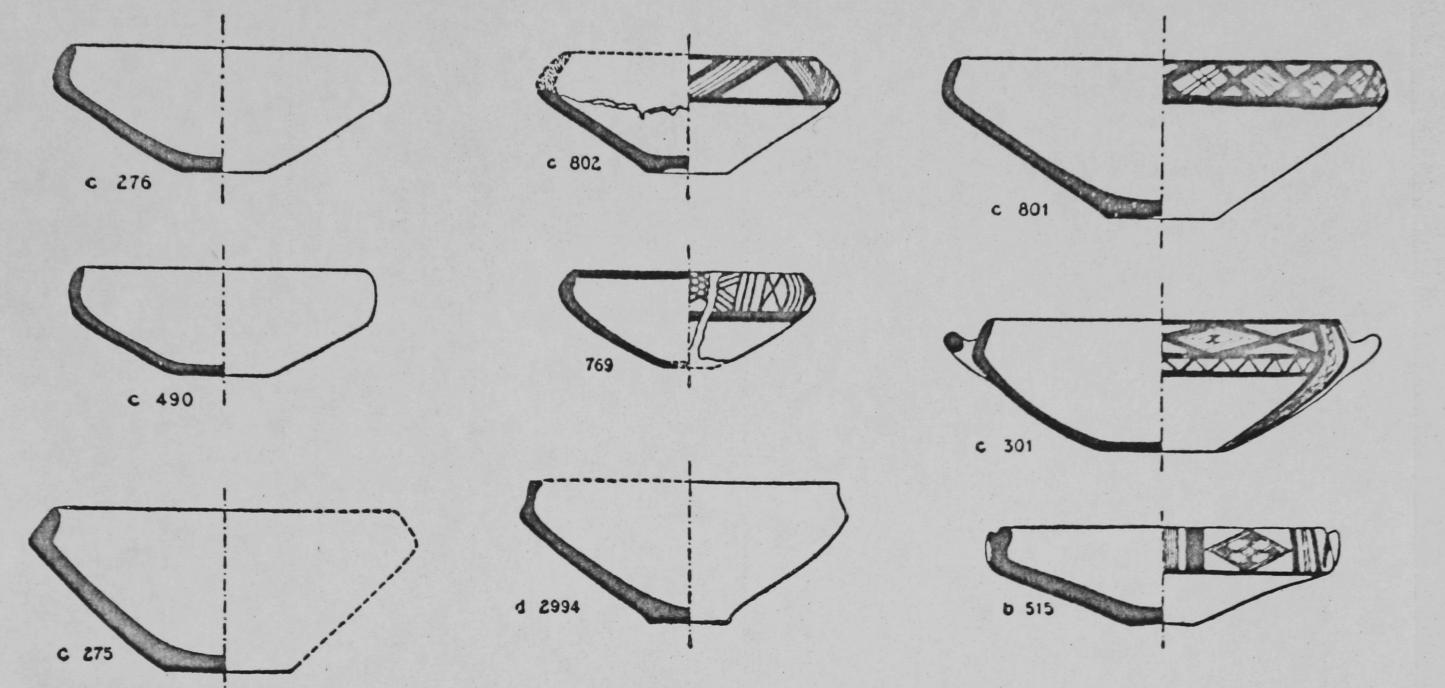


FORMS OF COPPER AGE VESSELS. SCALE, 1:5 (EXCEPT e 686 AND b 3262, SHOWN 1:10)



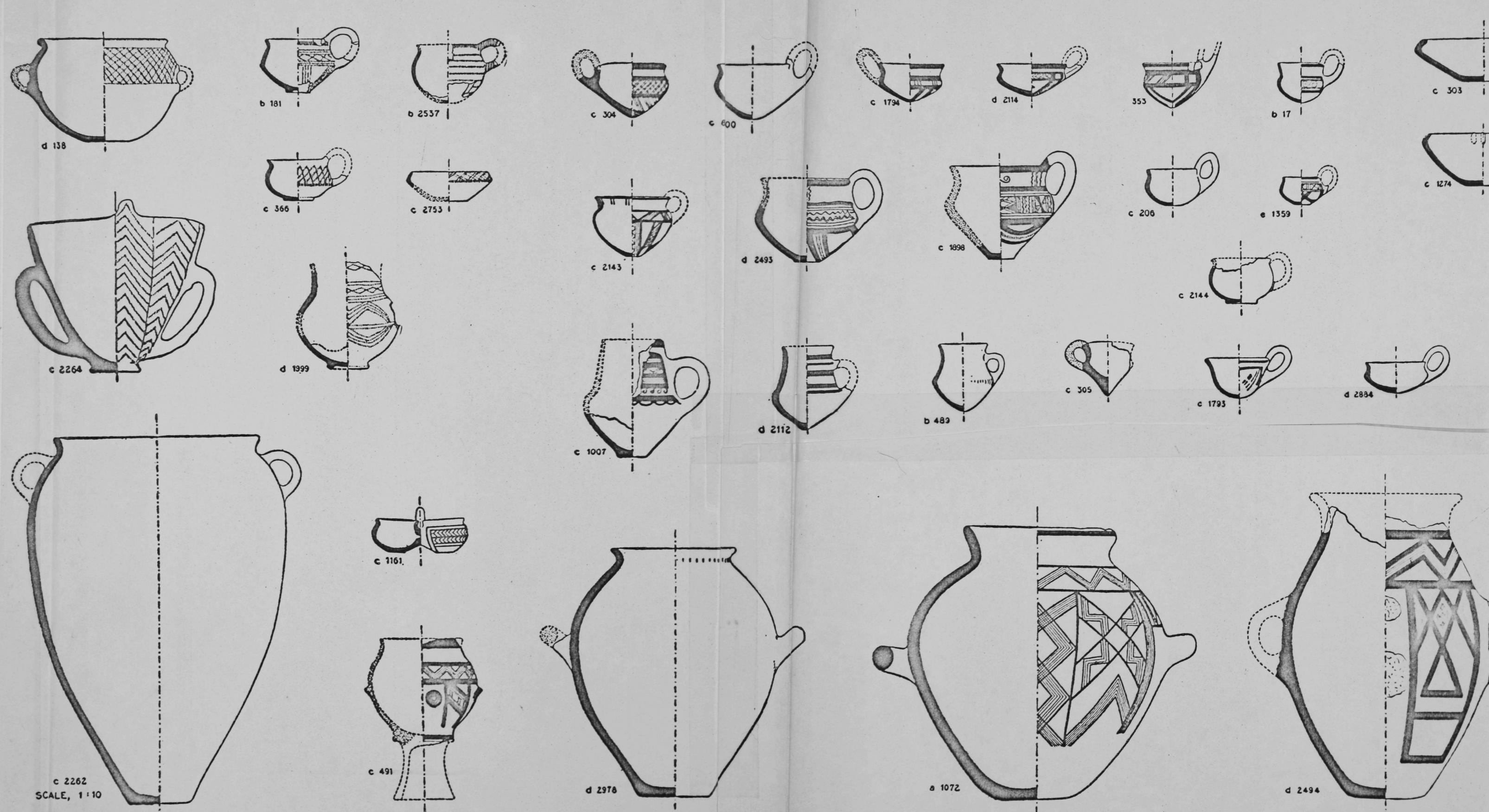
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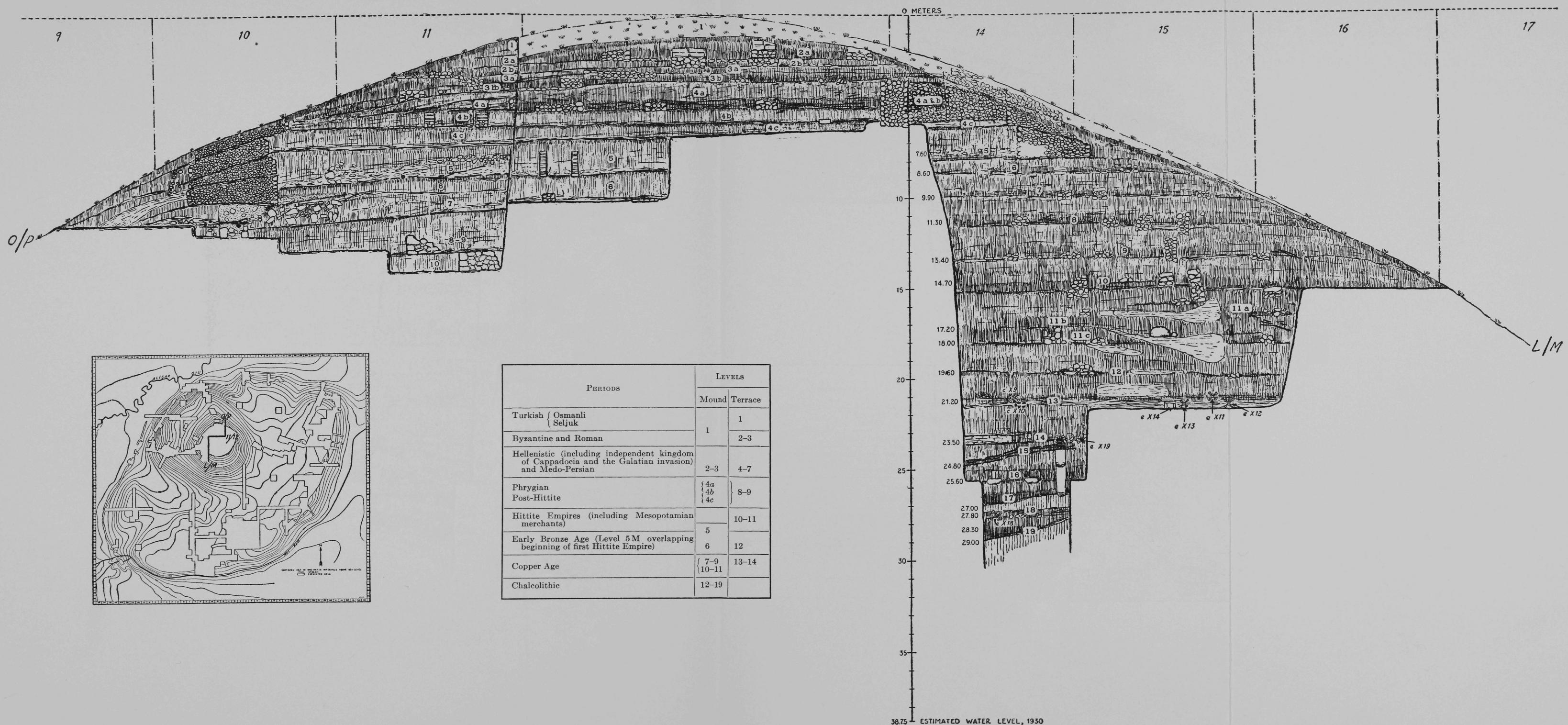


W. W. R.

SCALE, 1:5 (EXCEPT c 2262)



FORMS OF EARLY BRONZE AGE VESSELS. SCALE, 1:5 (EXCEPT c 2262, SHOWN 1:10)



NORTH-SOUTH CROSS-SECTION TO THE CITADEL MOUND: EASTERN PROFILES OF O9-11 AND L12-16, SHOWING LEVELS 1-19. SCALE, 1:200

